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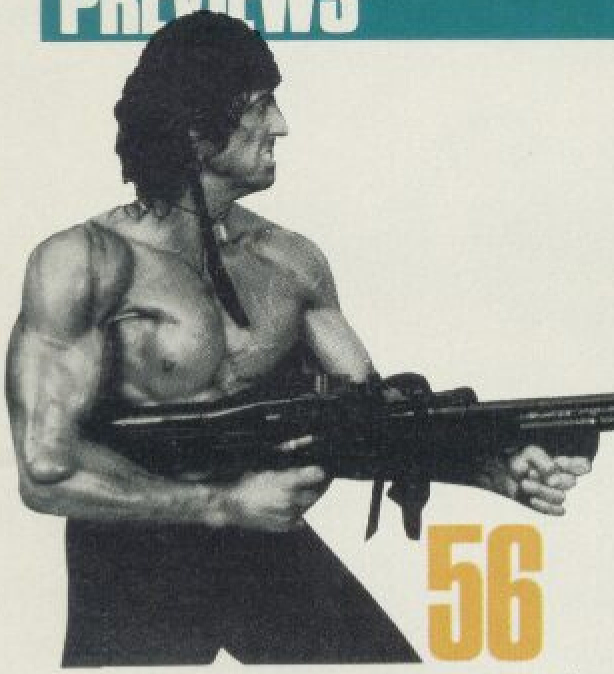
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(*YS* Helpline enquiries between 10am-1pm and 2-5pm, Wednesdays and Fridays *only*!)

**Your Spectrum, Sportscene Specialist Press, 14 Rathbone Place, London W1P 1DE.**

ABC **55,126**


Back to Skool
oops!
Dragged back for another term, Eric continues his one-man fight against the Education system. All his old adversaries are there, plus escapees from the Biology room and, even worse, girls! Lucky he stocked up on stink bombs over the holidays!
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## FRONTLINES

## FROM THE H/P



*Brring-brring, brring-brring*! There goes the helpline again — look, you're gonna have to excuse me . . . Mmmm, thought so. That was yet another call about the *Sprite High, No Limit* program that appeared in the October ish. One measly misprint and my life is in tatters. We said that you only needed 16 bytes to save the Designer Code when it should've read 164. An' as if that wasn't bad enough, the problem spilled over onto that month's Digi'T'ape. The mag was used as a reference when the tape was mastered, so the Designer Code has only 16 bytes on the tape. Oops!

For you, there are two ways out of the situation. You can either type in the remainder of the Designer Code to fill in the gap or buy issue 20 of Digi'T'ape where they'll be a working version. For me, there is only one way out . . . farewell cruel world!

Oh OK, you talked me out of it. (*Drat! Ed*). Or at least **Pete Mackin** from Thruxton has with his query about Hex loaders. He's looking for a quick'n'easy way of sussing out a hex number's decimal equivalent. What he doesn't want is a long program that'll force him to mess about in machine code. Well, Pete, the method I've come up with is quite sneaky — it uses the unusual Speccy feature of numeric variable evaluation from within a string. Now in hex, instead of going from 9 to 10, you move from 9 to A — but A still has the decimal value of 10. The letters that come after, follow a similar pattern until they reach F, and that's 15. Now as hex is base 16, the next hex number after F is 10 and that represents 16. So, the second column of a hex number is in 16s rather than tens. Are you still with me? Right type in this short routine that'll evaluate any single byte hex number (anything from 00-FF). To keep it short, it hasn't got any error trapping and it ain't exactly what you'd call user-friendly — but it works, and I reckon it's exactly what Pete's looking for:

```
10 INPUT A$
20 LET A=10: LET B=11:
LET C=12: LET D=13: LET
E=14: LET F=15
30 LET N=VAL A$(2)+
(16*VAL (A$(1))
40 PRINT A$;"=";N
```

Oh, and one more thing — you must remember when you're using this routine that Caps Lock should be on.

And from one neat use of Basic to another. **Craig Thompson** from Brighton is looking for a routine that'll allow him to 'input' on any part of the screen. I'll go along with that, Craig — I've always reckoned that entering data at the bottom of the screen is boring, plus it's pretty cheapskate.

Right, I expect you're just waiting for me to launch into a string of POKEs. Just shows how wrong you can be. POKEs are all very well, but as you know (probably from first-hand experience), they have a nasty habit of working irrationally. So, just to be different, here's a method that doesn't need the memory modificators:

```
INPUT AT 22,00; AT 10,10;
"ENTER DATA"; A$
```

There's no great mystery about how this works. As you can't normally enter data through anything but the lower screen channel — those two lines at the bottom of the screen — the easiest way round the problem is to extend those two lines to twenty-four. Then you can input where you please. Now that *is* clever!

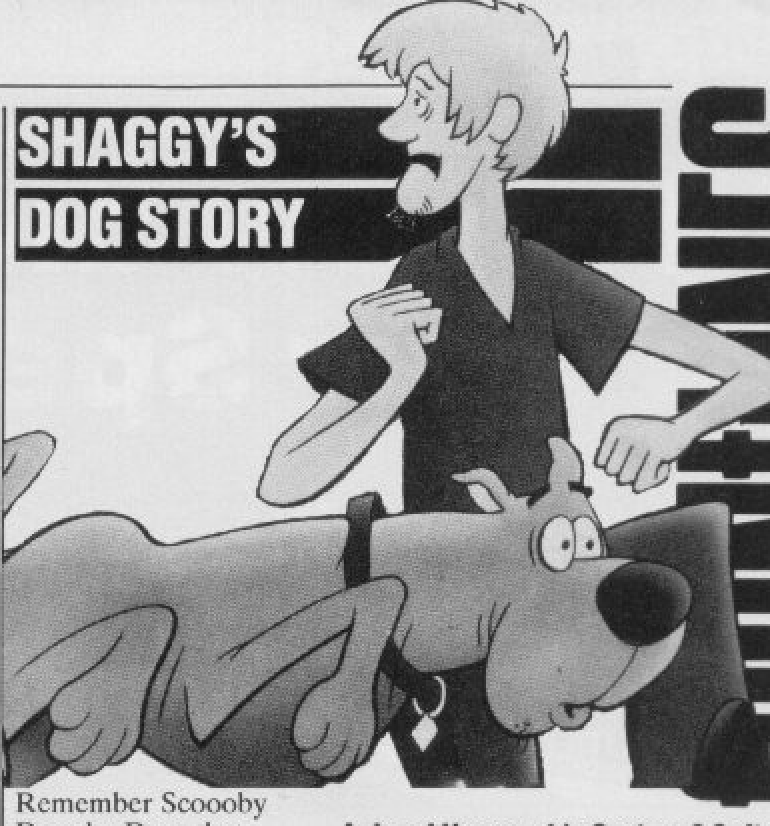
That's my lot for this month, so I'll be getting back to my *cold* coffee!

Catch you on the phones.

**Troubleshootin' Pete**

*Pete's phone lines are open Wednesdays and Fridays only. You can phone him on 01-636 2416 anytime between 10am-1pm and 2pm-5pm.*

## SHAGGY'S DOG STORY



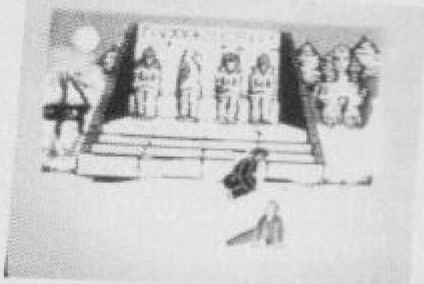
Remember Scoooby Doooby Doo, that cuddly canine of Hanna Barbera *(Who she? Ed)* cartoon fame? Well he's back with a vengeance to star in his very own computer game, *Scooby Doo in the Castle Mystery.*

Elite describes the game as "the first every computer cartoon". It features those daredevil detectives Velma, Daphne and Fred, the evil Mrs McUrloch and that creepy coward, Shaggy. There's also a special guest appearance by Sam Shark of Jaws fame.

Elite reckons they've started a new craze in computer games (hope that's not a shaggy dog story) and Sales Director Steve Wilcox says, "the best comparison we can draw is with laser disk games."

If you wanna sniff out more details give Elite a buzz on 0922 55852.

**Aah-so! Honourable System 3 Software has jumped on the honourable bandwagon and gone for a ride round the world. The game is the new and almost original *International Karate*. So, for an exploding fistful of £6.50, you can travel to exotic places, meet interesting people and beat them up...**



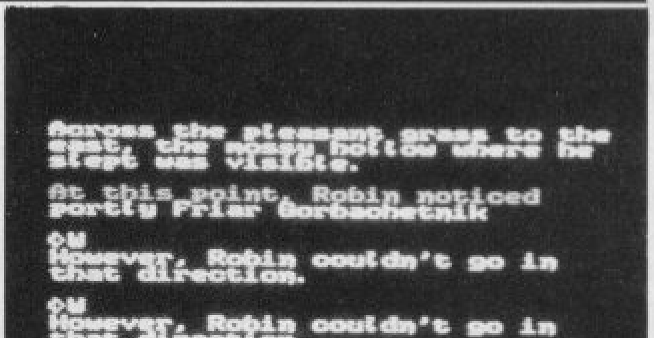


**Eye eye, what's goin' on 'ere then? It's a shot from a new game from a new company... and it looks like fun! Christian Urquhart (really) ex of Ocean and Gremlin Graphics has joined Mike Smith of Alphabatim, and this is their first offering, *Robot Messiah*. It'll be out this Christmas with a price tag of £7.95 and that, as they say, is all we know!**

## DAYLIGHT ROBINRY

Someone's taking the mickey! A new adventure game from Silversoft called *Robin of Sherlock* is due for release in November — and it's not all it appears to be, funnily enough. It's a multi-quest parody that falls somewhere between Melbourne House's and Adventure International's — and aims to have you falling about with laughter.

If you want to find out what's next on Silversoft's spoof list give 'em a ring on 01-985 5614. *The Hampstead Hobbit?*




**Watson your screen? Hood of thought it's Robin?**

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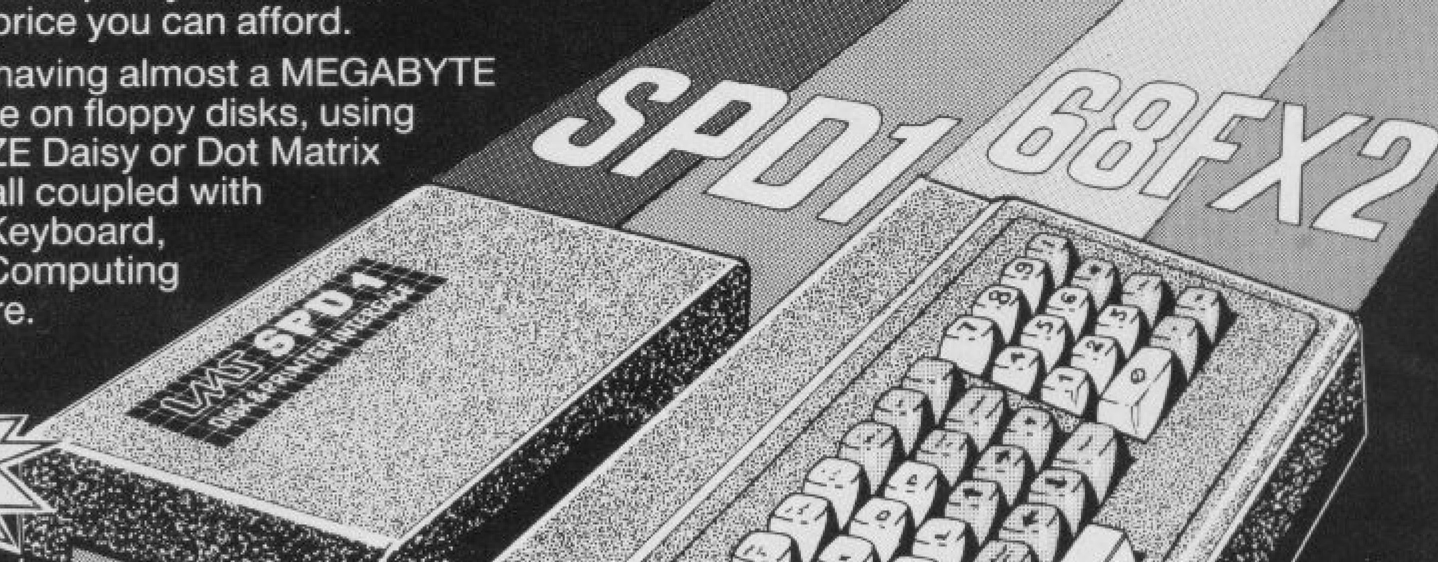
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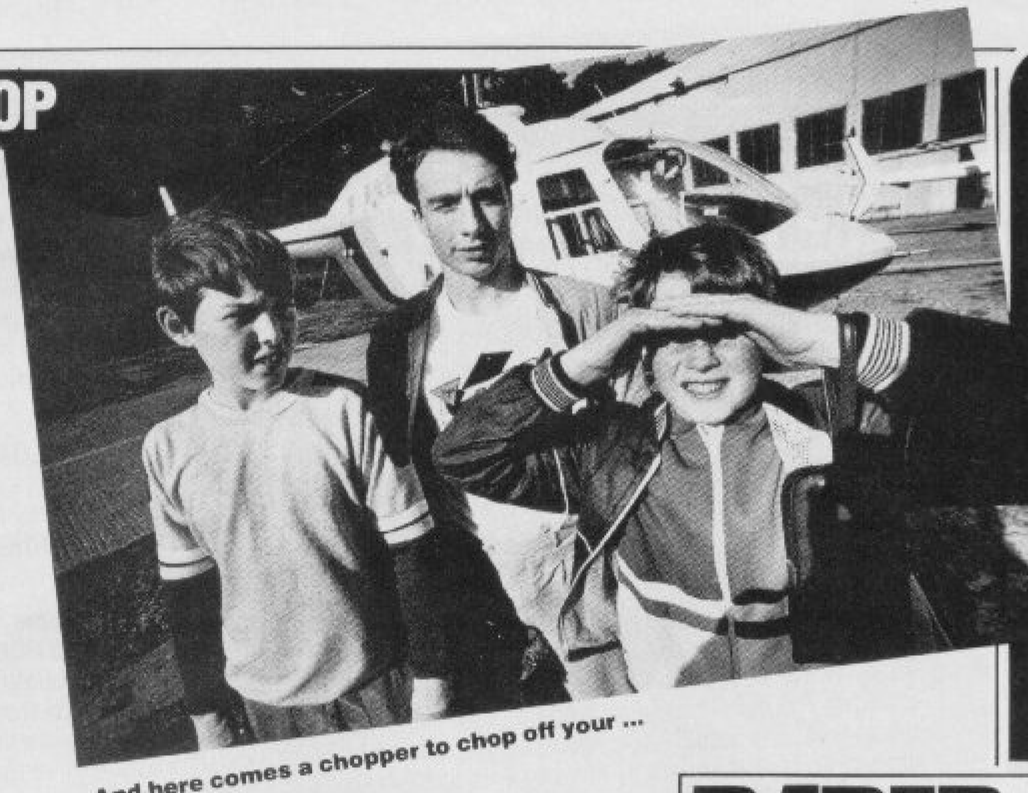
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# FRONTLINES

## FOR THE CHOP



And here comes a chopper to chop off your ...

These three pale-green people are the luckless winners of the Virgin 'Spot-the-difference-between-the-helicopters' competition. As appropriate punishment for being such clever-clogs Simon Kinder, Keith Fenton and Thomas Greenbank were flung around the skies above London in a real chopper, enabling them to comprehensively spot-the-difference between up and down, ill and well, and alive and dead.

Keith, 27, from Sleaford in Lincolnshire, had some idea of what to expect having flown in a helicopter on a TA training exercise, but he acknowledged 'this would be different'. Too right, a teensy little four-seater aerial bicycle on just about the windiest day of '85 — no wonder Simon (an ashen-faced 12 year-old from 'Uddersfield) kept tight-lipped, but Thomas — also 12 — seemed to wish he'd stayed home in Haslingfield, Cambridgeshire as he cheerfully admitted to being 'a bit shaky'.

Everybody took last pictures of each other for next-of-kin, the pilot had a last-minute read of the Owners' Instruction Manual, then it was brown paper bags all round and off into the strato-thunderus. How thoughtful it was of Virgin Games to have treated 'em all to a slap-up lunch just before take-off, though we're sorry *YS* can't help out with the dry-cleaning bills chaps...

We bet you can hardly wait for the 'Spot-the-difference-between two Great White sharks' competition!

## IT'S GRRRREAT!

Gremlin *Monty Mole* Graphics has snapped up the license for the new adventure role-playing books, *The Way of The Tiger.*

Apparently, Gremlin wasn't the only software house with its eye on the tiger but authors Mark Smith and Jamie Thompson finally succumbed.

For those of you not in the know about *The Way of the Tiger*, the books follow the toils of Avenger, a Ninja warrior, in his constant battle against the forces of evil *(I know the feeling. Ed).*

If you want a few more clues phone the Gremlins on (0742) 753423.




## ONE STEP BEYOND

This is gonna be some Christmas for the Speccy! Latest to confess what it's up to is Beyond Software.

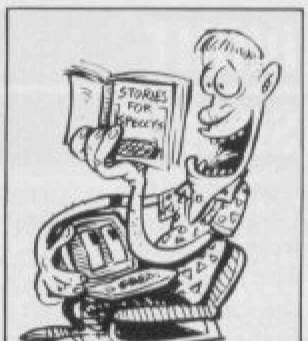
*Enigma Force* is the sequel to *Shadowfire.* It's not Zoff-en that you get the chance to carry on after you've completed a game but now you can join a four man Enigma team in a fight against the tyrant of a warring planet. *Enigma Force* carries a £9.95 tag.

*Bounces,* at £9.95, is a martial arts game that gives the player the choice of eight characters — funny ol' name for a karate game!

Finally, we have received a secret dossier on the new *Spy vs Spy* game. It takes place on a deserted volcanic island inhabited only by that famous pair of two-tone undercover agents.

The man who can reveal the rest of Beyond's secrets is Victor Wheeler on 01-353 2320.

## PAPER DATA

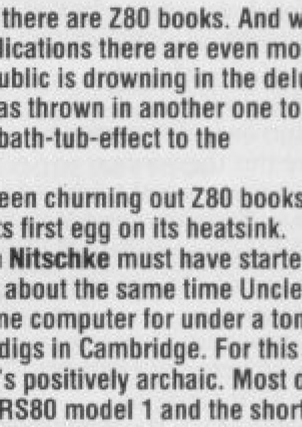



**Advanced Z80 Machine Code Programming**
**by William Nitschke**
**Interface Publications/£12.95**

There are Z80 books and there are Z80 books. And when it comes to Interface Publications there are even more Z80 books. Even as the public is drowning in the deluge of Z80 books, Interface has thrown in another one to observe the Archimedes bath-tub-effect to the marketplace.

In fact, Interface has been churning out Z80 books since the ZX80 warmed its first egg on its heatsink. Talking of which, **William Nitschke** must have started on his rather unoriginal task about the same time Uncle Clive reasoned that a home computer for under a ton would probably buy nice digs in Cambridge. For this book is not just out-dated — it's positively archaic. Most of the examples deal with the TRS80 model 1 and the short-lived Laser 200 (cor, I bet Nitschke was one of the few that bought one!) The somewhat more successful Spectrum is mentioned once or twice but not in detail.

This book does have some useful information in it but it's also got a lot of noddy stuff as well. Take the section on writing commercial games — I'd be embarrassed to see 2D and 3D mazes in block graphics in the pages of *YS* let alone sitting on dealers' shelves. For the foolhardy, you can buy this book from most WHSmiths or even send a £12.95 cheque to Interface at 9-11 Kensington High Street, London W8. But if you really want to know about Advanced Z80 machine language, you'd be better off waiting until it's serialised on the back of your cornflakes packet!



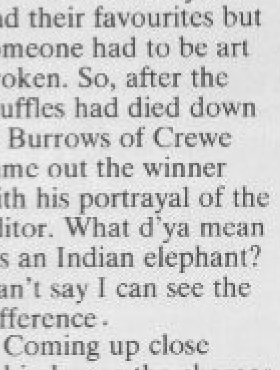

**Tony Samuels**

## fRONtLiNES

### RIGHT SPRITE

Remember the Ferguson Sprite Compo from issue 18? The standard of the entries was so high that running battles were fought over which should be the overall winner and carry off a Ferguson Monitor Colour TV. Everyone had their favourites but someone had to be art broken. So, after the scuffles had died down A Burrows of Crewe came out the winner with his portrayal of the editor. What d'ya mean it's an Indian elephant? Can't say I can see the difference.

Coming up close behind were the charger from G P Craig of Dundee, Alex Revesz from Holland for his amazing Roger Willis look-alike, and finally C Powell from Hemel Hempstead for his high-flyer, the tri-plane. Ferguson cassette recorders are on their way to you all.



**The sprites is right!**

# hacking away

**It's just not *Fairlight*... well, not any more it isn't as *Chris Wood* presents more hundred percent hacks and guaranteed no-joke POKEs.**

Let's be modest and not admit that we're going to start with a crack-hack. Remember the *Fairlight* review last month? You may have noticed that **Dave Nicholls** did not give any POKEs for the game. To spare his blushes, cracking *Fairlight* is not a trivial task. The actual protection isn't that hard but the tactic is to wear you out long before you make it — there's a total of 140 stages of decryption from you hitting LOAD to the game starting!

First it decrypts itself 20 times just to turbo-load the second turbo-loader which then decrypts itself before loading the actual game. As the routines are cumulative, it should be impossible to pop in any POKEs as the game loads. Enter **ZZKJ** (whose full name is so long we had to leave it out last month even though he supplied the *Gyron* stuff) and the impossible is a short program away. Run ZZ's program and you'll get infinite lives, the ability to carry as much as you like, five barrels and the ability to open any previously locked doors!

If you don't want all of these options then just miss out the relevant DATA lines, being careful not to omit line 400. When you run it, you will not see the *Fairlight* loading screen although its attributes will load and the program will run as normal. Remember you saw it first in *YS*!

```
  1 REM FAIRLIGHT POKEING PROG
  10 LET T=0: FOR N=18000 TO 181
75: READ A: LET T=T+A: POKE N,A:
 NEXT N: READ A: IF T<>A THEN  P
RINT "CHECKSUM ERROR": STOP
  20 FOR N=20000 TO 1E9: READ A:
 IF A<999 THEN  POKE N,A: NEXT N
  30 RANDOMIZE USR 18000
 100 DATA 221,33,203,92,17,93,5,
62,255,55,205,86,5,48,241,6
 110 DATA 20,33,130,94,243,49,0,
91,205,195,70,33,86,96,17,21
 120 DATA 209,1,153,1,237,176,33
,40,209,17,40,145,1,19,1,237
 130 DATA 176,235,54,201,6,9,38,
145,17,186,70,26,111,203,182,19
 140 DATA 16,249,205,40,145,33,1
74,210,6,120,62,56,50,176,92,205
 150 DATA 195,70,62,195,50,198,2
20,33,181,70,34,199,220,62,55,50
 160 DATA 233,218,195,223,218,23
7,176,195,32,78,141,197,200,221
 170 DATA 224,229,232,235,247,19
7,229,62,32,237,177,182,242,197,
70,35,209,237
 180 DATA 82,235,66,75,17,246,70
,237,176,229,235,54,237,35,54,95
 190 DATA 35,54,201,205,238,70,5
0,239,70,225,193,16,214,201,62
 200 DATA 58,61,61,230,127,237,7
9,184,146,147,129,129,236,244,22
5,247,208,22741
 320 DATA 175,50,232,241: REM
Infinite Lives
 330 DATA 62,24,50,110,245: REM
No More Weight Limit
 340 DATA 62,24,50,23,248: REM
No More Locked Doors
 400 DATA 201,999: REM Data End
Marker
```

Next please! Here's a short and sweet one from **Martin Barrio** of Wales. Type this in, wind the tape past the first loader and then enter RUN and press PLAY to give you infinite lives in *Pheenix*.

```
10 CLEAR 24500: LOAD
"p2" CODE 24532
20 POKE 29375,0: LOAD
"p3" CODE: RANDOMIZE
USR 30105
```

Which reminds me — if you send in single POKEs, and it's not immediately obvious how to get them in, please please provide a small program to do the work. I mean, some people have sent in single POKEs for *Alien 8* and *Knightlore*! You might like to see your name in print but the people who try them are going to think you're a right Anorak (see *YS* issue 18, page 15) when they don't work. End of soapbox spot.

Meanwhile if you enjoyed looking at the unused sprites in *Jet Set Willy* using the little program in issue 16, **Christian Keane** of Liverpool suggests you try some of these numbers instead of the 512: 300,350,10,170.

*Jumping Jack* is our next victim courtesy of **Hakan Strom** from Sweden. For infinite lives run the following program and then delete it by typing 10 'Enter' and 20 'Enter':

```
10 FOR f=23296 TO 23311:
READ a: POKE f,a: NEXT f
20 DATA 175,1,141,117,
2,3,2,3,2,62,24,3,2,195,
66,111
```

MERGE in the first program on the *Jumping Jack* tape and then enter:

```
POKE 26034,0: POKE
26035,0: RANDOMIZE
USR 26030
```

Start the tape again to load and run the game.

**Simon Grice** from Chorley has mastered the facts of life — well at least he's sussed the POKEs for the *Birds and the Bees*. MERGE in the Basic loader and insert the following POKEs before the USR command and then RUN it:

POKE 37852, *lives*
POKE 37664, *start screen number-2*
POKE 37088, *number of flowers to visit·5*

**Keg Davies** from Lancashire has supplied a set of POKEs for *Glug Glug* and *Empire Strikes Back*. For *Glug Glug*, MERGE in the Basic loader, add POKE 23316,201 before the PRINT USR and run it. The game will load and stop; you can enter any of the POKEs below and use RANDOMIZE USR 34349 to start playing:

POKE 33430, *lives* (from 1 to 11)
POKE 34139,0 (infinite lives)
POKE 31288,0 (unstoppable bullets)
POKE 31482,0 (permadeath for nasties)

And for *Empire*, wind past the first loader on the tape and run this one instead:

```
10 CLEAR 23999: LOAD ""
CODE: POKE 23309,251:
POKE 23310,201: LOAD ""
CODE: RANDOMIZE USR
23296
```

This will load the game and then stop. Enter POKE 53322,0 and RANDOMIZE USR 28500 to start playing. When you hit Fire on the moons level, you'll find the screen sticks on red and you just keep getting that energy...

If you don't feel up to POKEing and you play Micro-Gen's *Herbert's Dummy Run*, you're in for a treat... oops cheat! Pop into the room with the ropes to the left of the starting room and make sure Herb is facing left. Hold down the keys 'C', 'H', 'E', 'A' and 'T' (wonder why they picked those keys?) and you can watch the magic happen. You've now got infinite Herberts.

Talking of infinite, the viability POKE for *Gyron*, given last month is much more viable if you POKE 29952 and not 299552! Maybe I need a POKE for infinite accuracy...

Finally, a desperate plea from **R Hollinson** of West Yorkshire for any POKEs for Quicksilva's *Glass*, I'd dig them up myself but I haven't had a chance to buy the game yet — is anyone out there ahead of me? Send you hacks, however humble, to Hacking Away, *YS*, 14 Rathbone Place, London W1P 1DE.

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I enclose a cheque/postal order for £ ________ (includes P+P) for my Spectrum Doodler(s). Allow 28 days for delivery. Full refund if not completely satisfied.

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**F E Electronics**
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SPECTRUM Doodler LIGHTPEN

**Rabbit tales ... air-raising experiences ... shaggy dog stories ... Vulcanic eruptions ... prize-winning elephants ... new Spectrums for old ... Elementary my dear Robin — it's all in Frontlines ...**

## YOUR NEW SPECTRUM

As we predicted a couple of issues back, the new 128K Spectrum has been launched this side of Christmas but on the other side of the Channel — in Spain. The surprise appearance came at the Sonimag exhibition in Barcelona at the end of September. The new machine has been released by Investronica, Sinclair's Spanish distributors, who were closely involved in its development.

At first sight, the 128 looks very like the Spectrum+, with the same keyboard we've come to know and curse! Underneath though there are a few changes. The microphone and ear sockets have been shifted round from the back to the left hand side. And there sitting next to them is a RS232 socket. Now, at the back, you'll find a built in RGB socket for connecting the computer straight to a colour monitor.

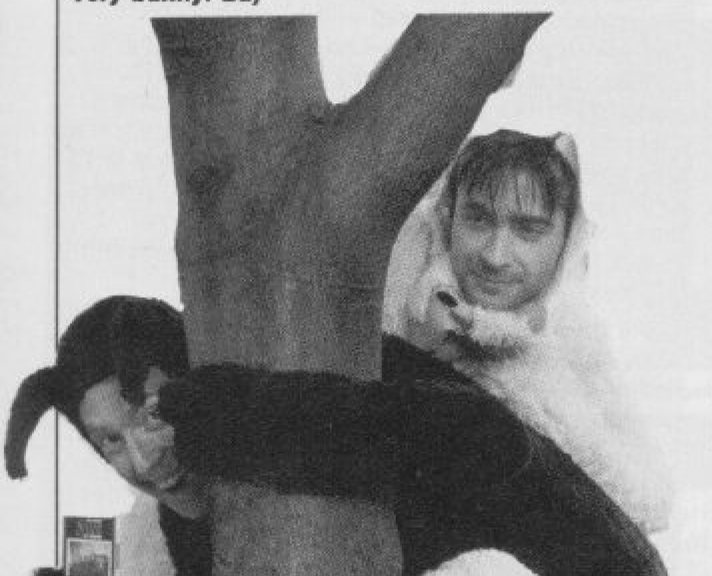
But the big surprise is the separate calculator keypad attached by a lead to the computer. There can be few people who would've predicted its appearance with the new machine — and perhaps not many more who'll find a good use for it!

So, when will the 128 make its appearance over here? Sinclair Research is only saying that it won't be this year. But then again, its very existence has been denied right up until its appearance. Mind you, there are still an awful lot of 48K Spectrum+'s sitting around waiting for Santa to sack 'em up




**The 128K Speccy ... in the UK soon?**

And now for all those other burning questions about the 128. Is it 100 per cent software compatible? Is it faster than the 48K Speccy? Do you need an Interface 1? Is the new three channel sound chip inside? To find out, turn to page 14 and read how Max Phillips overcame the temptations of the Sangria and Spanish sun to bring you the first full hands-on review of the Speccy 128.



**Hare's Virgin rabbiting on about its latest triumph — the resurrected Rabbit Software. Virgin rabbits? Wot a mixamatosis (sounds pretty hare-brained to us)! The first game to hop your way is *The Great Fire of London* at only £3.99 — warren offer! *(Ha ha very bunny. Ed)***

## NEW YOUR SPECTRUM

You've read about the new Spectrum, now read about the new *Your Spectrum.* Your favourite magazine *(Yes, this one — what did you think? Ed)* is changing. From next month you'll find more of everything that's made *YS* so successful. For you, there'll be more pages of editorial — almost double the number that you're used to. There'll be more games reviews, more programming, more of just about everything, in fact. *(And if you're really lucky there may even be more Ed's comments! Ed).* Plus there'll be games maps, cartoons and a few surprises thrown in. For us, there'll be late nights, working all weekend, sore fingers from all the extra typing, *(And probably a cut in wages to pay for the extra pages if you don't stop moaning! Ed)...*

And just so you don't miss us on the shelves next month, there'll be a game cassette stuck slap bang on the front cover of the new look *YS.* That's right, a free demo version of *Rasputin* which promises to be the hottest game this Chrissie. How can you turn down a chance like that?

The big question, of course, is why we're changing a magazine that's as close to perfection as you can possibly get. OK, who's the wise guy who said it's 'cos we're all big heads! Well, it's all down to you — or it is if you filled in the readers' survey in issue 17. The great cry that came out was for more of everything — and that's just what you're gonna get! An awful lot of you got the Ed worried by saying that you wanted to see him sacked but there ain't a hope in hell of that happening — not, we might add, that we'd want it, of course, and anyone who spreads rumours about street parties and the rest of us going on month long hols, is telling whoppers, honest... sir. *(Glad to hear it. Ed)*

And now the moment you've all been waiting for — the winner of the Sinclair pocket TV for the best suggestion. A slight hitch occurred 'cos every time we asked the Ed to choose one, he kept coming up with the creepy crawlers who said they'd double his salary. *(Well, I thought it was a very sensible suggestion! Ed).* In the end we plumped for Michael Sellar of Edinburgh who said that if he was the Editor he'd make the mag bigger both in pages and content.

So sensible was his suggestion, in fact, that we're going ahead with it from the next issue. So, from the January issue make sure you look out for a bigger, better *YS.* You'll find full details of all the changes further on.

Oh, and we nearly forgot. There's one rather special change we haven't mentioned yet — the new look *YS* will be called... Well, turn those pages fast!

## GERM WARFARE

Pour yourself a cup of Domestos and settle down for an evening with *Gerry the Germ*. He's the cute little killer who features in Firebird's new game of that name. Your task is to guide Gerry round all the squidgy bits inside a human body with the final goal of killing his host. But don't expect your knowledge of biology to see you through — these are some mighty interesting intestines. Gerry has to row a boat across the bladder, he takes a train from the pancreas *(Saints alive! Ed)*, and the kidneys are set in a lavatory. The emphasis in *Gerry the Germ* is very much on fun and fantasy — there are no high scores and no time limits.

*Gerry* is one of four new games from Firebird due for release at the end of November that come into a new category — Hot games. The other three in this initial Gang of Four are *Rasputin*, an amazing Ultimate-like 3D arcade adventure *(Of which much more later! Ed)*, *Runestone*, which made a brief appearance once before from Games Workshop and *Costa Capers*, in the tradition of *Technician Ted*. They'll all cost £7.95 and you'll soon spot the Hot boxes 'cos they're red.

For more red hot news from Firebird phone Phil Pratt on 01-379 6755.




**Spend a day on the bleach with *Gerry the Germ*.**

# OPERATION CARETAKER...

**Feel like bashing your head against a brick wall when your copy of *Jet Set Willy II* has failed to load for the umpteenth time? Well bash no longer 'cos Global Software claims to have the answer.**

Global's new package, *Operation Caretaker* promises to solve all your problems — apart from a pounding headache. In case you haven't already guessed, it's an azimuth head alignment system. And for those of you that don't know, azimuth is just a posh way of referring to the position of the head in your cassette recorder.

The ideal head position for reliable loading and saving is at right angles to the tape and an azimuth alignment system lets you set the heads as close to this as possible.

*Operation Caretaker* contains a cleaning and demagnetising tape, a small screwdriver and of course a natty little piece of code. The program works by listening to a pre-recorded signal on the tape. It already knows exactly how the signal should sound, so a few calculations are all that's needed to determine whether the tape is running at the correct speed, or if the clarity of the signal is good enough for a successful LOAD.

Using both graphics and text, the screen shows the tape speed and the quality of the signal — if it's not giving a good reading you'll need to adjust the azimuth with the screwdriver provided until the readings improve. All hi-tech stuff!

Programs like *Operation Caretaker* are a relatively new idea though Speccy users have been adjusting their azimuths for years.

In fact it's so simple, even the Ed could do it! All you need to do is listen to your loading signal and twiddle with the azimuth screw until the signal improves. But having used the 'twiddle method' myself for some time, I must admit that I found *Operation Caretaker* consistently more reliable.

The only doubt I have about *Operation Caretaker* is the cost. £9.95 isn't particularly expensive but it's the sort of program you're only going to need now and then. So, unless you have more trouble than most, the best thing to do is persuade your local computer club to buy one so it can be loaned to members as the need arises. Alternatively, keep twiddling!

**Tony Samuels**

# hard facts

**Hardware hiccups are a hassle — write to *Stephen Adams* and he'll do his best to come up with a cure . . .**

Let's kick off with a common printer problem. **Paulo Felix** of Portugal wants to know how to use his Brother HR5 with his Interface 1 using the lead supplied. This is simple enough — just link pins 5,6 and 8 together inside the plug and then it'll work. Perhaps Sinclair should think about including such info with its interfaces.

For some time **Chris Price** of Huntingdon has been seeing black . . . thick black bars on his TV screen to be precise! It turns out the Ferranti ULA chip had risen from its socket so that only about half of the 40 pins were making good contact. Chris secured his firmly in place with sellotape and all is now fine. The moral? Go gently when you're connecting and disconnecting your add-ons.

**David Savage** also has a TV problem. When he connects his issue 2 Speccy to his spanking new Toshiba colour set, the glorious technicolour fades through a sickly green to boring old monochrome. This can be fixed by opening up your Speccy (wave bye-byes to your warranty) and adjusting a capacitor to bring back the colour. The capacitor is a brass screw with a plastic disc round it — the one to twiddle is the one nearest the front of the board. Issue 3 owners shouldn't need to try this — the improved ULA adjusts the colour all by itself.

David also has a dicky Symbol Shift key and wants to repair it. The best thing to do is get a whole new keyboard underlay for a mere £2.50 from any Spectrum repair outfit.

**Michael Duffy** of Eccleston has a trickier situation. His Speccy won't work at all for about half an hour when he first plugs it in — it crashes continually. All I can suggest is to try pushing the ULA back into its socket (if it has one) while the power is off. If this fails, you'll have to resort to professional repairs which will cost anything from about £18 upwards. Good luck!

What do you do with a dead ZX Printer like **A Munro**'s? You could try a gentle sweep with a kiddy's paintbrush otherwise it's back to Sinclair for a quick repair job.

**Robert Foster** has acquired a Carton ASCII keyboard and wants to interface it to his Speccy. Best to scrap its entire printed circuit board and rewire some (or all) of its keys Speccy-style — see the *Interface Zero* article in *YS* issue 5 for an appropriate diagram. Once done, connect the 13 wires to the Spectrum, eight to the address socket, five to the keyboard socket (soldered underneath) and that should do the trick. Happy typing!

Did you know some people with Spectrums don't play games? **J A Kirkman** uses his to run a department in Redhill Hospital. But he's got problems using the BETA interface with the Kempston 'E' centronics interface. These both use the same ROM area (8-16K) so, while they both work with Interface 1 (which uses 0-8K), they can't both be used at the same time. The only solution is to change to a non-ROM based interface — give it a try! He also says that the only way he can get his Speccy to keep going is by leaving it on. He's had his on for *three years* now and has had no problems! Oooh the poor power supply . . . but I suppose it keeps the electricity board happy!

And now a problem for those of you with a bit of cash around. **Barry Mutton** who inhabits the Isle of Sheppy can't print all those lovely £ signs using *Tasword* with his Brother printer. To resolve this, just nip into the 'Graphics definition' routine and pop in the codes to produce a £ sign. If you need more than four, define one character as the first four and a second as the last four. Then use the graphic character(s) in your text instead of the £ sign. You won't see £ on the screen but it will print okay. You can save this mod to tape by saving *Tasword* again using the 't' option on the menu.

That rounds off this month's look at hardware heartaches. If you've got any problems of your own, write to me, Stephen Adams, at Hard Facts, *Your Spectrum*, 14 Rathbone Place, London W1P 1DE and I'll see what I can do.

# CHRISTMAS BINGE

Ocean software is behind a Chrissy compilation tape featuring some classic best sellers from Ocean, Ultimate, US Gold and Software Projects. Called *They Sold A Million*, the tape will cost £9.95.

The twin-tape pack will feature *Beach Head, Daley Thompson's Decathlon, Sabre Wulf* and, you guessed it, *Jet Set Willy*! So if you haven't already got the set, it's going to be great value.

It'll be in the shops by the end of November — just in time to get it on your Christmas list. Oh, and if Santa is reading this he can get further details from Ocean's PR on 061-980 3488.

# HOW LOW CAN YOU GET?

Now you all know the Alphacom 32 don't you? It's the ZX printer's old rival — the one that's fully compatible but offers improved quality and a speed of 80 characters a second. So what's it doing back in *Frontlines* then? Dean Electronics has just slashed its price to a measly £29.95 including your first roll of paper. But the offer's on only while stocks last, so if you want one move fast! (0344) 885661 are the digits to dial...



**Going cheap but don't give it the bird!**

# WRONG END OF THE STICK

Let's tell you a tale with a moral to it. Think back to *Frontlines* a couple of issues ago. Do you remember the story about Vulcan Electronics and the great deal they were doing on their Gunshot joysticks? Guess who got the wrong end of the stick then? OK, we admit we shot ourselves in the foot on this one! We should've said that the Gunshot and interface package was priced from £16.95 — not £10.95. Still a fair old bargain, you have to admit.

So, what did Vulcan do? Force *Frontlines* into a locked room with a Gunshot and one bullet? Interface us to the mains? Nope, *Frontlines* lives on. And what's more Vulcan has kindly agreed to cover up for our blunder. The good news for you is that all the *YS* readers who sent off cheques for the measly amount of £10.95 during the month the mag was out, will receive their Gunshots and Interfaces. The good news for us is that Vulcan isn't knocking the difference off our salaries.

And the moral of this story? *(Never trust a story in Frontlines? Ed).* Nope, if we tell you to go for something, you go for it!

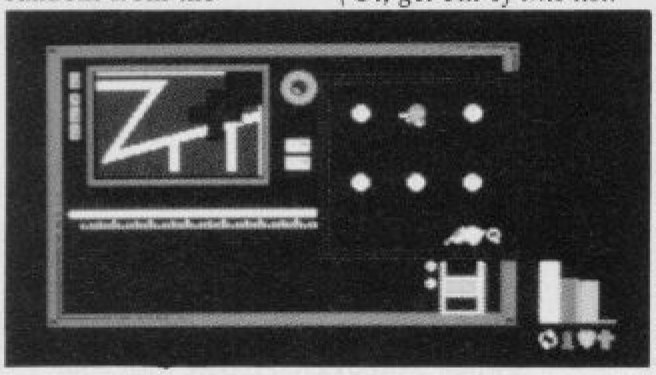


**Spock spots illogical price offer.**

# FRANKS VERY MUCH!

Reeelaaax! And find out if you've entered the pleasure dome in one of the smooth Frankie sweatshirts that Ocean offered to *YS* readers. The ten new sartorial sophisticates chosen at random from the thousands of entries are Jonathan Stangroom of Stratford-on-Avon, Gordon Robertson of Dalkeith, Kirsti Jeggo of St Albans, Matthew Lacroix of Halesworth, Troubleshootin' Pete of *(Oi, get out of this list. I've told you, you're not having a sweatshirt and that's final! Ed)*, John Roberts of Chesterfield, C Welsh of Glasgow, Anita Seeger of Rushden, David Toby of Winchelsea, Robert Tilling of Broom and David O'Shaughnessy of Warrington. Hey, no sweat!

And if you cast your minds back to the compo you'll remember we asked you who the lead singer of Frankie Goes To Hollywood was. The answer, as you all knew, was Frank Sinatra *(Surely some mistake! Ed).*



**First the game — now the T-shirt!**

# microdrivin'

**Have you experienced the joys and heartaches of owning a Microdrive? *Andy Pennell* has and he's here to sort out your problems and share hints, tips and handy routines . . .**

Okay, okay, you win! So many of you have written in about my *Running Repairs* program in *YS* issue 8 and its sequel *Patching up the 'drives* that I've just got to start by sorting it out. The good news for those of you who gave up typing it in or don't have such a collector's item as issue 8, the complete program will shortly be made available by digi'T'ape. Don't order it yet 'cos it's not ready — just keep watching this space for an announcement soon.

If you did have a bash at typing in the assembly listing, you may have discovered a slight problem — a number of EQU statements were omitted as follows:

EVALBC 061E, CHKEND 05B7, D_STR1 5CD6, N-STR1 5CDA, T_STR1 5CDC, DRIVE 83FB, OPENM 1B29, WRBUF 123D and WRBIT 1878.

Some of these addresses vary according to which Interface 1 ROM you have but the program takes care of this with its own look-up tables.

**J. Ballard** was among those who spotted the missing EQUs. He also asked a few poignant questions: What filename is given to a blanked sector so he can delete it, and what are the two checksums for? Easy enough — a blanked sector is given the strange filename CHR$ 0+CHR$ 1+CHR$ 2+ . . . and so on up to CHR$ 9. As its name starts with CHR$ 0, the file won't show up in a CAT but believe me, it's there. The first checksum corresponds to DESCHK and will show up possible corruption of the filename section of a sector. The second checksum is DCHK and will show up errors in the actual data area of a sector.

Hardware is not really my forte but Microdrives will be Microdrives and a lot of you seem to have bother with them. Typical is **Patrick Kane** who gets the syntax error '?' in valid Interface 1 commands as well as other spurious error reports. This is the Interface 1 ROM failing to page in when it should. The Interface 1 commands are then fed to the Spectrum's normal ROM which flags them as errors.

Patrick lists the various solutions he's tried, none of which work all the time. One thing he hasn't tried is cleaning his Speccy's edge connector (use a clean pencil eraser) — I know from personal experience that this often works! **Charles Buszard** wrote in to point out that a quick clean can also cure spurious 'Microdrive not present' errors. Incidentally, Sinclair says there is nothing wrong with Patrick's interface!

**C. Oswin** also has a connection problem — he wants to place one drive on top of the other, as his desk is too short to take them side-by-side, but he can't get a suitable cable. Sinclair used to supply a connecting cable that was about six inches long but most users have a cable half this length. It seems that the connecting cables should be as short as possible to prevent interference problems and I have my doubts about the long extension leads that some companies sell. My advice is to do things the proper way — use a short cable to the Speccy and the double-connectors between the drives. Sorry Mr Oswin but I respectfully suggest you buy a short piece of wood and some nails!

Finally a sob story from *YS* hack **Max Phillips** and his *Droid Wars* program in next issue. Guess who saved his development work repeatedly onto the same cartridge? Guess whose Speccy had a fit and formatted the tape for him? Moral — always make back-ups as you work on to *two* tapes! Max now uses a save routine that saves on to two drives, saves on to cassette, saves across the network, blows an EPROM and punches a paper tape connected to the RS232!

That's it for another month. Don't forget that if you've got any hints and tips, handy routines or nasty problems with the Microdrive or Interface 1 this is the place to air them. Write to Microdrivin', *YS*, 14 Rathbone Place, London W1P 1DE.

# THE SPECTRUM WITH NO NAME

***The 128K Speccy hits the streets in Spain this month but we still don't know if and when we'll see it over here. Beyond the call of duty free,* Max Phillips *flew to Spain to try out the secret Sinclair.***

Most people have heard of, and by now seen pictures of, the new 128K Speccy. But very few have ever used one. Sinclair flatly denies that there are machines in the UK (most of the design and testing work must have been done over the phone) so I packed up a *YS* survival kit (including a bunch of tapes, an Interface 1 and Microdrive) and set off for one of the world's shortest breaks in sunny Spain. My mission? To penetrate the top secret and heavily armed Investronica factory in Madrid.

The Spanish connection is easy to follow. Investronica is Sinclair's Spanish distributor and will soon be manufacturing its own Spectrum+s. The 128K Speccy is its idea — designed specifically to sell in Spain and Mexico. But a lot of the work on the new machine has been done by Sinclair's Metalab and there are odd machines holed up in English software houses working on 128K software. No one knows when an English version might appear, if it will at all — though I'll bet my last pesata it won't be this year. The machine I used at Investronica's research lab wasn't even a finished Spanish machine so there's little reason to suspect that an English 128 will be anything like this . . .

The 128 looks very different in the pictures but it turns out to be a familiar friend — a Spectrum+ case and keyboard with '128' tippexed on the top and a huge chunk of gun metal bolted on the right hand side. It's a real heatsink and when they say 'heat' they mean heat — it's painful to the touch. There's also a separate numeric keypad which plugs into the front right of the unit. Other things have changed too; the MIC and EAR ports have been moved to the left hand side, next to the reset trigger and a combined RS232 and MIDI port using one of those QL-style phone jacks.

Round the back, there's an RGB port for a proper colour monitor. Investronica's machines were totin' BMC's QL monitor producing a display like you've never seen before. The colours are dazzling, rock steady and pin sharp. Try and stipple this and you won't get far! It's a con though — the QL needs a much higher resolution monitor than a Speccy and it's unlikely you'll bolt something this good onto yours. Investronica is also trying to figure a way to get a colour composite video signal onto the same plug. This'll let you use an El Cheapo quality monochrome screen for programming and word processing and just go for colour when you need to on a TV set.

The acid problem with the 128 is compatability with existing software — the Spectrum's design leaves nothing for you to play around with. And most programs stretch the machine to its limit — so much so that one slip and existing software just won't go on an upgraded machine. The 128 takes the tough and reliable solution even if it might be hard to get along with — it's schizophrenic.

Switch it on and it's a 128K Spectrum and it's not very compatible with your existing programs. Enter the command SPECTRUM and bang goes your 128K, bang goes your RS232/ MIDI interface, bang goes your numeric keypad and you're staring a Spectrum+ in the face. There's no way to go back and use any of the 128K features without resetting the system — no, not even from machine code.

The advantage is that the 48K mode *should* be 100 per cent guaranted, no strings, genuinely compatible with all existing programs. I say should because the machine I saw wasn't — Investronica claims that because current 128s use EPROMS (and yes, the first lucky owners will get EPROM machines) then there are timing differences that stop turbo-loading tapes working and there seem to be other odd hiccups still to sort out. Still, the brute force '48K mode' method should make perfect software compatability possible.

The expansion connector is unchanged and most add-ons will work as before in 48K mode and possibly in 128K mode. The only hitch is with add-ons that attempt to load software into RAM during power-up or reset. Sorry, since it powers up as a 128K machine, many such add-ons will be in real trouble. This may effect ROM based games but I don't think that's going to bother anyone unduly.

The disadvantage to dual modes is that you're going to need special 128K version of programs to use the new features. Simple Basic programs work fine in both modes but anything that's remotely trick won't and that includes 99 per cent of commercial products. Still, the transition has already started and there are games being given the 128K treatment (not mentioning any names, Ocean).

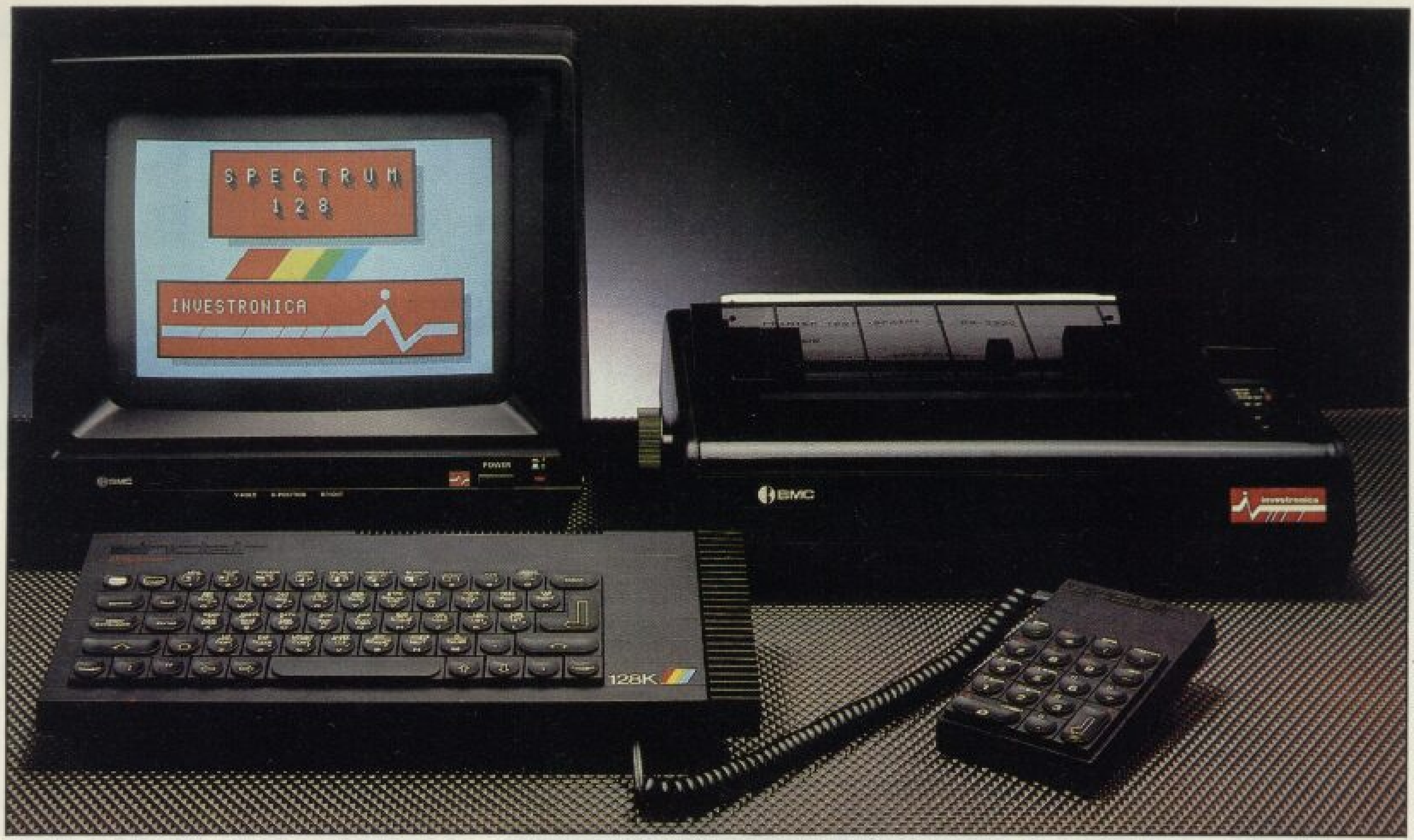
## 128K SURPRISES

128K mode is something of a shock. It provides a proper intelligent screen editor, a calculator and a sort-of enhanced ZX Basic. Numero Uno (as they kept saying) is that the single keypress keyword system has been junked. In 128K mode, you type out keywords letter-by-letter (sorry, no abbreviations allowed). Programs are entered and edited with a full screen editor — a bit like writing your programs with *Tasword*. You can switch back to a 'command mode' where you can enter Basic commands by pressing Cambio-Cmnd on the numeric pad (Cambio — that's Symbol Shift to you and me).

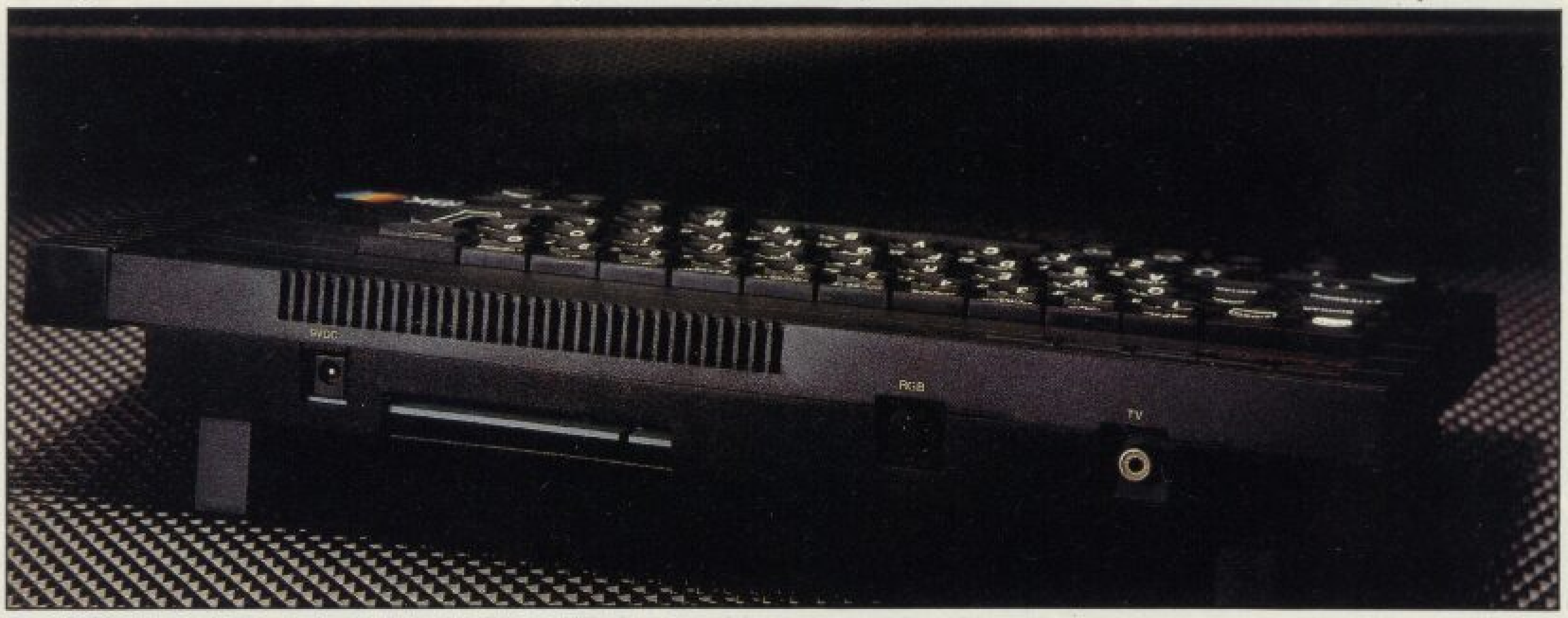
All editing really takes place using the keypad although some of the keys (like the cursor keys and delete keys) are duplicated on the main keyboard. The keypad provides — wait for it — cursor movement by character, word and line as well as jumping to the start of the previous Basic line or the end of the next. You can delete by character or by word in either direction. The editor is also pretty smart — it splits multiple statement lines up onto separate screen lines and will scroll up and down the listing as you move through it. There's no more stopping to reLIST a bit of program or hitting up arrow five times to get to the line you want. Better still, you've still got on-entry syntax checking — press Enter and the position of any mistake is highlighted. The 128 even uses a bug-shaped UDG instead of the grotty old question mark!

The Basic editor is nothing short of a dream. Any time you lose, typing out keywords in full, will quickly be saved by the time it takes to get the whole program in and working. That said, it does lack things every self-respecting screen editor should have; there's no search and replace, no copying and moving lines and so on . . .

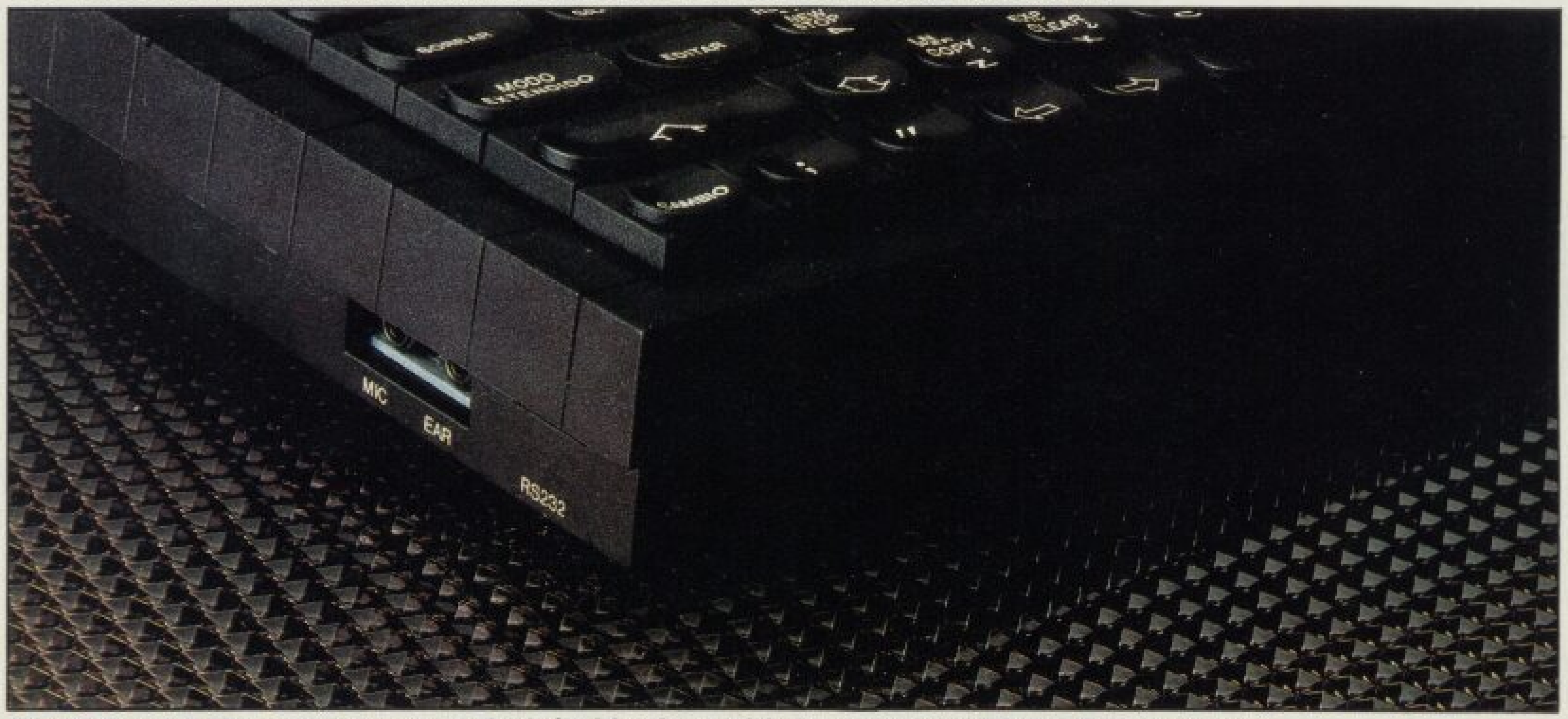
Basic programs written in 128K mode (with fully typed keywords) can be loaded in 48K mode and vice-versa and will run quite happily provided they don't do anything too tricky. You can also use the extra facilities of 128K mode to write a program and then switch with SPECTRUM with your program still intact. Well, that's the




**The Spanish 128 will be available as a complete set up with a superb BMC monitor and a serial dot-matrix printer.**



**The RGB port on the rear of the machine will also provide a composite video signal.**




**The MIC and EAR ports are now on the left side along with the combined RS232/MIDI interface.**


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theory — I couldn't even get the demo tape to load in 128K mode. The odds are in your favour if you want to move your machine code programs across as well — provided your routines aren't too big, don't rely on the standard Spectrum ROM or step all over any of the new interface and bank-switching gear!

Once you're in command mode — you use the E command to go back to editing your program — the keypad acts as a four function calculator. It seems to use ZX Basic for its arithmetic routines and Investronica claims that it has an enormous number of calculator memories (probably Basic variables) even if there was no-one around who knew how to work them!

The other extra application is the ability to use the screen editor as a text editor. You just type, for example, E A$ and, yes, you get to edit A$. A couple of the keypad functions change here — instead of start and end of previous and next Basic statements, you can scroll up and down by screenfuls. The editor works in insert mode or overtype mode or can be set to automatically indent text — the left margin sticks wherever the cursor was when you entered S/A mode. Quite what you use this for I'm not sure. You can also train the editor to wordwrap so that words don't get split at the ends of lines.

Although most big machines have a text editor as standard, it seems a bit out of place on the Speccy. It's not a word processor as it doesn't offer half the facilities you need and can't format the text for printing. But it could come in handy for creating data files or source code for programs in other languages and so on. Since you can specify the variable to edit, you can keep several text 'files' and programs in memory and use the calculator all at once.

128K mode Basic is good ol' ZX Basic with extensions for sound and for handling the extra memory. There's also talk that it will feature handy extras such as RENUM and DELETE but we'll have to wait and see.

Sound is very changed — for a start there's a hole where the tiny little speaker should go. Sound is now produced (in both 48K and 128K modes) through the TV speaker or through a Hi-Fi or cassette recorder connected to the MIC socket. So all existing programs are suddenly a lot noisier and you've got volume control. This means that everything from simple BEEP commands to complex sound programs such as Tony Samuels *Samsynth* in *YS* 19 will all work a lot better!

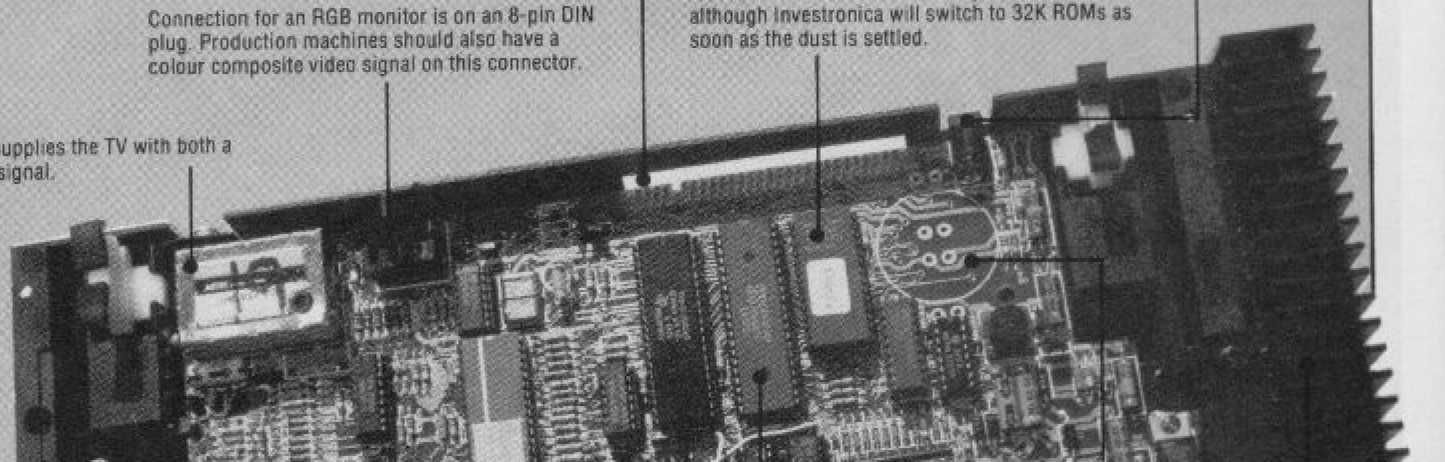
In 128 mode, the beeper is banished forever — there's one of those jolly 8912 chips which provides three separate voices for chords, pure sound and white noise and limited envelope control. This allows you to do passable impersonations of BBC Micros and Commodore 64s although 128 Basic doesn't appear to provide complete control of the chip.

## SUPER SOUNDS

The new sound command is PLAY followed by one or more strings containing a music program in single letter instructions and numbers. For example Y sets the type of sound, O sets the octave and so on. You can embed comments inside PLAY strings to make the otherwise cryptic strings more readable. PLAY can also be used with the MIDI interface . . . this is three spare pins on the RS232 port that let the 128 talk to all sorts of musical instruments, synthsisers and so on. The interface supports up to eight voices rather than the three on the built-in sound chip. In theory, programs that are written for the 8912 chip will work straightaway on

### 128 WIDE OPEN . . .

**Here's your first glimse of the guts of a 128 — sorry about the warranty Investronica! The extra portion of chips makes the board so hot that the heavy metal heatsink on the right is essential . . .**



anything plugged into the MIDI interface but, again, the 128 I tried refused to co-operate.

Sound has to be one of the 128's radical improvements. Although Speccy games lead the world, their sound always has to be taken with a pinch of imagination. Even a simple 128 mode conversion can include 8912 support and the transformation will be dramatic. The best thing I saw a 128 do was the machine sitting next to mine and it did it for the entire time I was in the building. Hooked to a fancy Casio organ and in turn to a Hi-Fi, it ran through a superb rendition of five popular tunes repeatedly. And it did it without reaching for its microdrive — all five tunes were loaded into memory and switched between automatically. It's an English demo program so expect to hear of it soon . . .

Investronica stalled on the exact details of the bank-switched memory system — as it did on the bulk of technical details. Its reason is that things might be changing dramatically — they sure are in for a busy month! The basic principles are 128K RAM divided up into 16K pages, any four of which can appear at any position in the Z80's 64K addressing space. There's 32K ROM on board (EPROMS on early machines) divided into 16K for the original Spectrum ROM and 16K for the 128K mode ROM. One source suggests that either the top or bottom half of the ROM is paged into the first 16K of the Z80's address space. However, Investronica detailed a much more sophisticated and versatile idea — on power-up, reset or entering SPECTRUM, the appropriate 16K of code is *copied* from ROM into a 16K RAM page and that page is then switched into 0-16K of the memory map.

This first page of memory is then, apparently, write-protected so that it appears to be ROM. If this turns out to be the case, it should be possible to pull all sorts of lunatic stunts such as altering ZX Basic and then switching to 48K mode. If the software control is there, you should also be able to dispense with the ROM altogether and run pure 64K programs. What a shame video memory still starts at location 16384 — you still can't persuade a Speccy to run the standard CP/M operating system without extra hardware. Rats!

In 48K mode, three RAM pages are switched in above the page pretending to be the 16K ROM. Who cares which pages they are as once they're in, the banking is disabled and you can't switch to any of the other pages. There's nothing a program can do, however wayward, to get back to 128K mode.

In 128K mode, three pages are switched in to give you a normal 48K system but the remaining 64K (four pages) are available by the bank-switching mechanism. This gives you around 104K free for Basic programs and their data and a maximum of around 120K for pure machine code. Remember that the system variables and screen area are still going to steal around 8K of the space.

## RAM DISK

The extra memory appears to be supported from Basic by the rather crude solution of a RAM disk — using the commands LOAD! and SAVE! So long programs have to be split into chunks and called from the RAM disk as needed. Note that this is non-standard syntax in terms of Interface 1 commands — you'd expect some new channels but, of course, not every 128 owner will have an Interface 1 and there isn't room to put some or all of the Interface 1 stuff in the 16K ROM in the machine. However, it should be possible to do your own bank-switching using IN, OUT, PEEK and POKE if you need greater control. Machine code programs can, of course, make the entire 104K (or 120K if the ROM really can be replaced with RAM) apears as one continuous chunk.

The 128's RS232 port is the same as the Interface 1's port — Investronica says it's pin compatible but since the pins are a different shape, you'll need a new cable anyway! It's a shame that it's not an enhanced version of the port as anyone who's tried it will know that you can die trying to make it do full-duplex (transmit and receive data at the same time). This makes it fine for printers and micro-to-micro links but modems will still be a pain in the neck. If you've got an Interface 1 attached, the built-in RS232 remains what Investronica calls 'the primary device'. Quite how your programs address the Interface 1 RS232 or how current programs will react to the new port remains to be seen . . .

As for pricing, Investronica sells old 48K Spectrums for 27000 pesetas (around £122) and Spectrum+s for 36000 pesatas (£164). It's price of 50000 pesatas for the new 128K machine works out at £230 over here which is probably no guide at all.

So how good is the 128? The extra memory and improved sound opens up all sorts of possibilities for new software. But the 128 is a bit messy since it doesn't incorporate or build-on the facilities provided by the Interface 1. Neither does it (apparently) provide any serious enhancements to the ageing ZX Basic other than a bare minimum of support for the new hardware features.

It will be interesting to see how the machine changes when it makes it to an English version. Certainly, I could think of things I'd rather have than a simple (and rather slow) text editor. And who needs a four-function calculator when all you need to do is stick the keyword PRINT before the calculations? OK Sinclair, we're interested and we know you can do it . . . why are we waiting?

## SPECCY SPEX

**Here's how the Spanish 128K Spectrum looks at the moment. Be warned, all details subject to change on production and UK versions!**

### PROCESSOR

Z80A, 3.5 Mhz.

### MEMORY

128K RAM in 16K pages.
32K ROM, 16K original Spectrum Rom for 48K mode, 16K for new 128K mode.

### VIDEO

As Spectrum.

### KEYBOARD

As Spectrum with extra Extended mode/ Symbol-shift keys for Spanish characters. Separate numeric keypad for use in 128K mode. Provides calculator and screen editing keys.

### SOUND

8912 sound chip, 3 voices, pure sound and white noise. New PLAY command provides control from Basic. Sound is played through TV — there is no internal speaker.

### BUILT-IN SOFTWARE

ZX Basic, Text Editor, Calculator, Basic screen editor.

### ZX BASIC

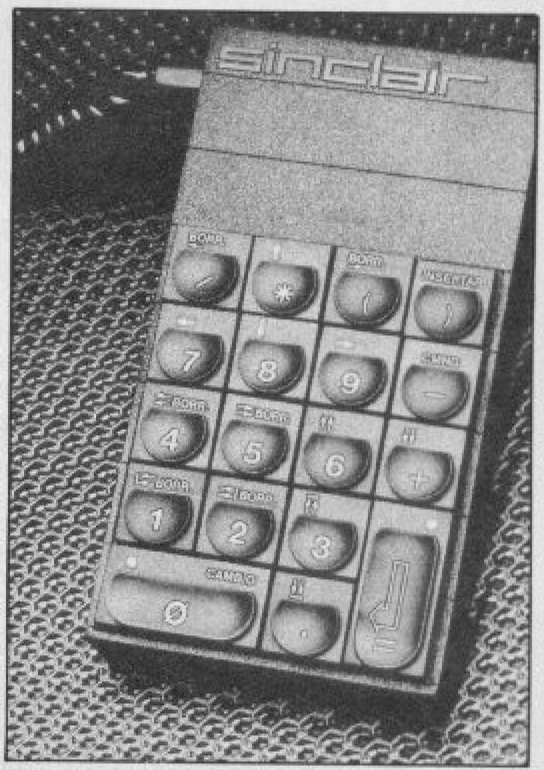
As Spectrum in 48K mode. In 128K mode, keywords must be typed in full and there are extensions for Ram disk drive (LOAD!, SAVE!, CAT!) and PLAY.

### INTERFACES

RS232, MIDI music interface, RGB monitor, Composite Video monitor. MIC, EAR and expansion connector as Spectrum.

### PRICE

50000 pesatas in Spain.
UK price £180?



**The keypad is standard and provides editing keys and a calculator.**

# YOUR SPECTRUM GO FOR GOLD

**Ready, steady ... Go! Are you in on the great race to find the *YS* Champ — the Greatest Gamesplayer Of The Year?! Make your break, and be our Gold Medallist!**

Where are all you ace gamesters? It's about time you took up our great challenge and let us know what high-scores are all about!

Take a look at this month's impressive line-up of high-scorers. If you can equal these fabulous figures, then let us know right away! Remember, we can spot a hacked or hyped score blindfold, so no cheating!

If you're our top-hot-shot of the month, we'll be asking you for your gamesplaying tips... and giving you a bundle of software in return. But even if you're not a monthly winner, you could still collect three free pieces of software if you're picked out of the Ed's hat — just like *Stuart Rice* of Upminster. So get that coupon sent off now!

## YS GO FOR GOLD

**My top 5 all-time greats are:**

1 ..............................
2 ..............................
3 ..............................
4 ..............................
5 ..............................

**My top scores are*:**

1 ..............................
2 ..............................
3 ..............................
4 ..............................
5 ..............................

**The next games I'm gonna rush out and buy are:**

1 ..............................
2 ..............................
3 ..............................
4 ..............................
5 ..............................

*You don't have to fill it all in but make sure you specify the level of difficulty for your scores.

**If you're going for gold, stick your mugshot here**

**Make sure you send us a black and white photo of yourself if you've filled in your high scores.**

**I'm going for gold! My name is:**

..............................

**Address** ..............................

..............................

.............................. **Postcode** ..............

**Now ask an independent witness to sign the coupon**

**Independent Witness**

**Name** ..............................

**Address** ..............................

..............................

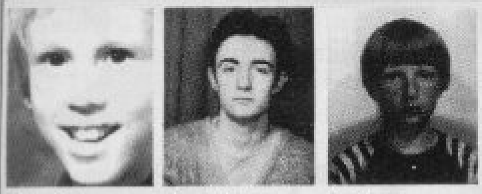
.............................. **Postcode** ..............

**Complete this coupon and send it to Go For Gold, Your Spectrum, 14 Rathbone Place, London W1P 1DE.**

YOUR SPECTRUM

# ALL · TIME · TOP · TEN

**1 BRUCE LEE** — US GOLD (up from 6)



Peter Dawson 1890025 | Mark Brown 1512000 | Graham Conner 1500175

**2 ATIC ATAC** — ULTIMATE (2)



Lars Lindholm 99% | Ludde Borgne 99% | Stuart Rice 99%

**3 SPY HUNTER** — BALLY/MIDWAY (up from 9)



John Marriot 2032375 | Ian Rogerson 682025 | João Peixoto 405815

**4 DALEY THOMPSON'S DECATHLON** — OCEAN (down from 3)



Craig Boddy 1314865 | David Bass 1202403 | Mark Stopes 1053570

**5 MATCH DAY** — OCEAN (down from 1)



Colm Kernan 21-0 | Darren Stephens 25-5 | Richard Brown 21-6

**6 GHOSTBUSTERS** — ACTIVISION (down from 5)



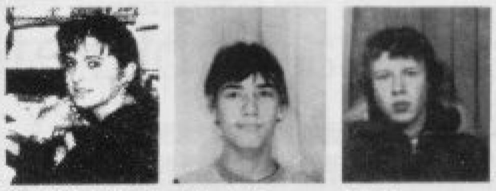
Peter Dawson $870000 | Alan Maber $310900 | Paul Golder 97,100

**7 STARION** — MELBOURNE HOUSE (RE-ENTRY)



George Forsyth 28918 | Scott Donaldson 3106 | Ludde Borgne 913

**8 JET SET WILLY II** — SOFTWARE PROJECTS (NEW)



Claudie Jeffries 100 items | John Kitts 91 items | David Ferguson 54 items

**9 KNIGHTLORE** — ULTIMATE (down from 4)



John Hudspith 100% | Antonio Gil 97% | Lars Lindholm 85%

**10 HYPERSPORTS** — KONAMI/OCEAN (NEW)

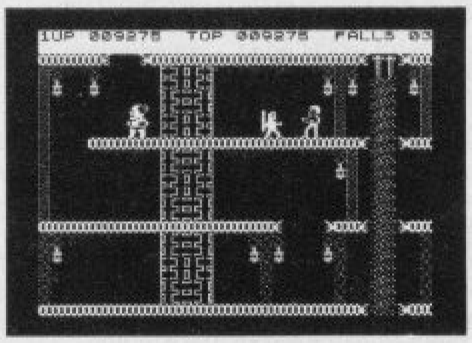


Paul Tutty with Ric & Titch 475984 | Craig Boddy 470693 | Scott Donaldson 465871

# YS GOLD MEDALLIST



**Name:** Peter Dawson
**Town:** Yate, Nr Bristol
**Age:** 13½
**School:** King Edmunds
**Hobbies:** Computers!
**Fave Game:** Bruce Lee, what d'you think?
**Fave Music:** All the latest hits




**Peter Dawson on Bruce Lee**
If you want my advice thwack everything that moves — the more violent you are the better. This ain't a game for the faint-hearted!

You've got to collect all the lanterns in the first three rooms before you can proceed. Then go to the middle room and look for the exit.

You'll be attacked by the Ninja throughout the game, though they're a bit wimpy. The Green Yamo is a completely different kettle of karate — so keep out of his way.

To get your own back on the enemy, let them take their flying kicks at you, then double back and go-a-chopping in their direction. It'll take three blows to knock out the Green Yamo but only two to finish off a Ninja.

When you eventually reach the wizard, avoid his eyes — the fireballs he sends out are lethal. Talk about looking daggers!

# NOW YOU CAN EXPLOIT SPECTRUM GRAPHICS TO THE ULTIMATE.

## With the Graphics Suite from Print 'n' Plotter.

If you're interested in producing great graphics with your Spectrum, then these programs are designed with *you* in mind.

And you *don't* have to be an expert. Even with no programming knowledge the programs will enable you to produce fantastic graphics to use in every piece of software you write.

Or you can use them just for the fun of producing computer art.

Each of the programs are inter-active and together they form the most accomplished graphics toolkit you will find on the market today.

But you can also use each of them separately, as each are self-contained and cover a specific area of graphics programming.

With Print 'n' Plotter's 'GRAPHICS SUITE', everything is made so simple you won't believe it.




## Just a few of the things you can do...

**PAINTPLUS (GRAPHICS SUITE 1)**

If you want to produce fantastic screen graphics or UDG's on your Spectrum, then you will find PAINTPLUS not only a complete graphics toolkit . . . but also the simplest to use at every level.

Facilities include: DRAW, PLOT, ARC, CIRCLE, FILL IN SOLID OR PATTERNS, FILL IN OVER MODE, DRAW RADIALLY, ARC RADIALLY, ENLARGE TO EDIT, PAPER WASH, BOX DRAW and so on . . .

As well as drawing, PAINTPLUS has a tremendous UDG section. It also has UDG "grabbing" from screen as well as full facilities for defining, saving and loading UDG sets.

The Organiser section of the program enables you to automatically store multiple screen graphics or multiple UDG banks.

PAINTPLUS comes with a demo of screens, animation and alternative character sets, plus a copy of Print 'n' Plotter PICTURE BOOK – 100 pages of instructions, hints, tips, listings and related graphics information.

**SCREEN MACHINE (GRAPHICS SUITE 2)**

SCREEN MACHINE is *the* graphics manipulator.

Use it when you want to take your graphics and turn them into professional machine coded data for use in BASIC or M/Code programs.

For instance:

SCREEN MACHINE will compress the memory consumption of your graphics to cram even more into the computer's memory –

As well as memory compression, SCREEN MACHINE allows you to put your graphics through a series of highly-sophisticated graphics manipulations.

These include ENLARGE, REDUCE, RELOCATE TO OTHER PARTS OF THE SCREEN, STEP AND REPEAT, BLEND SCREENS TOGETHER, RECOLOUR SELECTIVELY OR GLOBALLY, FLIP SCREEN, etc.

And SCREEN MACHINE also has a dedicated Text Compiler – ideal for anyone who uses lots of text for instructions or menus on screen.

SCREEN MACHINE also comes with a copy of PICTURE BOOK and a demo that's so good you can't believe it.

**ART-O-MATIC (GRAPHICS SUITE 3)**

Ever wanted to produce screen graphics for Adventure Games, Educational, Training, or Scientific programs and run out of memory because the graphics handling consumed too much memory?

If so, you need ART-O-MATIC, Print'n'Plotter's great new graphics compiler.

With ART-O-MATIC you can draw, define and store an incredible number of screens or parts of screen in your programs as compiled instant machine code which is usable from BASIC or M/C.

The exact amount of compression possible depends on your graphics, but up to 99% is possible and an average of 85%-90% is usual.

ART-O-MATIC is a complete graphics drawing program, so you can produce your works of art and compile at the same time.

The instruction book and demo that comes with the program show you *everything* you need to know about cramming great graphics into your Spectrum.

**SPRITE MACHINE (GRAPHICS SUITE 4)**

There have been a number of programs called Sprite Generators. Most of these are self-contained and not a great deal of use to people who want to use Sprites in their own programs.

SPRITE MACHINE is different. This program was written with *you* in mind – whether you are a professional, amateur or beginner.

There's never been a simpler Sprite program to use. All you have to do is draw your Sprite and then choose from a fantastic range of options to get it doing what *you* want.

You can: animate your Sprites, choose any direction and starting position, adjust speed, adjust height, choose running time, decide on edge actions such as bounce, wraparound, reflect or stop, make intelligent decisions like strike and collision actions, colour your Sprites or take colour from the screen, trace or non-trace, etc.

The program comes complete with a cursor-operated Sprite drawing board and catalogue/store function.

Instruction booklet and demo are included with the program.

Now *you* can have professional Sprites in *every* program you write.

### ORDER NOW OR ASK YOUR LOCAL COMPUTER SHOP!

Send to: Dept YS Print 'n' Plotter Products Ltd.
19 Borough High Street, London SE1 9SE
Credit Card phone orders: 01-403 3622.

Please send me the following:

......Paintplus @ £9.95 ......Screen Machine @ £8.25

......Art-O-Matic @ £8.25 ......Sprite Machine @ £9.95

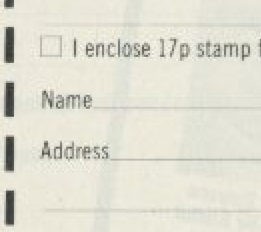
☐ I enclose remittance in full

☐ Please bill my Access/Barclaycard/Visa No.

☐ I enclose 17p stamp for details of products.

Name

Address




Prices include post & packing for U.K. delivery. Overseas orders please add 20% for additional handling and post.

Print'n'Plotter Products

# FORUM

**Sticks and stones may break Pete's phones but your letters will never hurt him. Write away right away to Forum, YS, 14 Rathbone Place, London W1P 1DE and you could be the star with the bundle of free software!**

## SPLIT JURY

I was casually looking through the game reviews in ish 19, choosing which hyper-brilliant new software to buy when horror of horrors, heavens to mergatroyd — they weren't there! What you may ask? The ratings were there, the reviews were there and even a picture of the screens. Not only that, the prices were there as well. *But* the joystick jury, with all their skill and talent (crawl), forgot to include those little boxes with the all important hit 'n' misses. Well spotted, eh? How about a Trainspotter Award?

And bring back hits 'n' misses!

**Chris Lee**
**Hull**

*Call yourself a trainspotter? Pheweee — you couldn't spot the 9.25 to King's Cross if you were strapped to the track. We did say that we were dropping the hits and misses. But if you want them back or you want anything else added let us know. How do the rest of you feel? Ed.*

## SHOP SOILED

How's this for a great scam? Next time you go into a shop with a Speccy on display and you want to show off your programming skills, try this little program.

1 PRINT "Your Message": POKE 23692,100: POKE 23613,82: GOTO 0 then press Enter. Now type POKE 23756,0 then enter and run that. And what's the result? That's right, a forever scrolling message that can only be erased by pulling the plug. Tee hee!

Just so you know how it works as well, the first POKE is for infinite scroll, the second disables the Caps Shift/Break Command and the third returns the line to 0.

**Chris Barker**
**Peterborough**

*And we all know the message you're going to print — "YS is ...". You can fill in the appropriate phrase here, provided of course, that it starts with the word mega! Ed.*

## STUFF 'N' NONSENSE

Okay you dirty rats! Listen up and listen good! Y'see, I'm sorta new to this stuff (very new) and I'm wondering if you would (crawl, crawl) start a column for new hackers like me who don't know how to break into games. I've collected *YS* since issue 12 so I don't know if you've covered the ground in previous issues. I'd be grateful if you'd let me know where I can find out how to go about putting in the POKEs. By the way, while I'm here would you (grovel, grovel) tell me where I can obtain issue 14 as I missed it.

**Steven Robertson**
**Dundee**

*You're obviously so new to 'stuff' that you've never noticed our fab* YS *back issues page. You'll find there not only issue 14 but some of the articles on hacking you want. Now go off and have a look — and hurry up about it, you're holding up the whole of Forum.... Right, can we carry on now? Ed.*

## TAPE TROUBLE

I'm writing in to complain about the quality of Speccy tapes. I've just bought *Hunchback II* — one side doesn't load and the other side only just loads.

Some tapes are so bad that they wreck your recorder and the rest of your tapes. Something should be done about this.

**Tim Doulton**
**Horsham, East Sussex**

*This is a complaint that we seem to be hearing more and more of. Let us know if you too have noticed a remarkable drop in tape quality and we'll take it up with the software houses. Troubleshootin' Pete.*

## WILLY NILLY

Always ready to accept a challenge, I thought I'd have a bash at the one you set in ish 18. Yes, it's *JSWII* time! Well, being a genius as well as very clever *(And nearly as modest as yours truly! Ed)*, I very soon came up with da goods. The following line when added to the mega-brill hacking program in *YS* will remove the infinite death syndrome at the touch of a button (0 to be precise!). This is extremely useful when you're playing the game with just the infinite lives POKEs.

170 DATA 33, 62, 229, 34, 208, 122, 33, 219, 254, 34, 210, 122, 33, 31, 56, 34, 212, 122, 33, 1, 52, 34, 214, 122

If you should get stuck in the wall after using this you'll have to teleport out.

Finally, to make a long story even longer, I found these POKEs using Mickmon, a superb, brill, mega *(We get the idea. Ed)* Disassembler/ Monitor. When the bugs have been steam ironed out then I just might send you a copy!

**Michael West**
**Bingley**

*Get those bugs out and send it in. Then we can all go back to hacking JSWII. What am I saying? Troubleshootin' Pete.*

## SITUATION NOT VACANT

I would like to apply for the Ed's job as he obviously doesn't have a clue of how to do it himself.

I know you think that nobody reads Input/Output but there are a few of us weirdos around. In *YS* 19 Input/Output seems to have developed a serious stutter and repeated five of your free ads.

I just thought I would let you know of this indiscretion and pick up a Trainspotter Award (and the job!)

**Mark J Weirdo jnr OBE.**
**Full time genius and president of the 'Hugo is a weird name' society.**

*You wouldn't last two minutes in this place. If you think you're weird you want to meet the Ed — or rather you don't! Now that's what I call weird! Count yourself lucky he's let you off without a Trainspotter Award. Troubleshootin' Pete.*

## SKOL DAZE

Is Troubleshootin' Pete totally thick and unco-ordinated or does he just do a good impression. *(You should see his James Cagney. Ed)*

I am, of course, referring to *YS* 19 your feature on *Frankie Goes To Hollywood.* First, he proves he doesn't know his left from his right — he says you stick out your right arm when walking but it's the left arm.

As if this wasn't enough he has the nerve to get his spelling wrong — Murder, Mystery and Suspence. Suspence? What kind of spelling is this for a reviewer? Didn't he go to school at all?

**Steven Duke**
**Newcastle-upon-Tyne**

*Lok her Ill hav yu no tht i wnt to a v gd skool — Eaton az it appns an im a vry gud spellar. Troubleshootin' Pit.*

## COMPUTER CRAZY

Can you please send me any information on the effects that computers are having on our health and how they affect society — or perhaps some addresses where I could obtain information of this type. I need this for my social studies project on Computers and Society at Hind Leys Community College.

**Daniel Murray**
**Loughborough, Leics**

*Here at the Castle Rathbone funny farm for computer related disorders we're all far too normal to know anything about this. Look I told you, not tonight Josephine... sorry about that. But, we've got some pretty sick readers who are dying to help you — just drop us a line here. Now I must go and put on that nice jacket with the arms at the back! Ed.*

## FOR THE CHOP

Just lately, I've been playing *The Way of the Exploding Fist.* Well, after hours of non-stop playing and countless almost fatal injuries, I found myself confronted by the elusive Tenth Dan himself. He sprang at me and within a couple of seconds I was biting the dust. As you can imagine, I was more than a little bit upset by his unnecessary display of contempt towards me. So, I sprang back and beat him up with a few tricks of my own. As he went down for the second time, I expected a 'Congratulations' message but to my shock and horror another Tenth Dan appeared. Not one to be beaten easily, I fought back the tears and as anger overcame dismay I started to beat up man after man. Each time a man went down, up came another one. When I reached the score of 188,500 points, nature called and I just had to pull the plug.

So, here I was sitting in front of my Speccy, staring blankly at the small white dot at the centre of my telly screen when it struck me! "Ouch", I cried! "It's about time the boffins at *YS* heard about

# O'LEVELS

## not just revision but also tuition for the spectrum 48k

| | |
|---|---|
| **Mathematics** 8 programs TOTAL 150k | fractions, square roots, decimals, logarithms, areas, sets, accuracy, bases, interest, volumes, indices, standard form, modulo, number sets, pie charts, histograms, simultaneous equations, bar charts, averages, probability, algebraic laws, quadratics, matrices, vectors, transformational geometry, trigonometry, differentiation, integration, factors, angles. |
| **Physics** 7 programs TOTAL 140k | reflection, wavelength and frequency, refraction, lenses, the eye and its defects, diffraction, colour, magnetism, motors, Ohm's law, amps, volts, series, parallel, electronics, heat, gas laws, energy forms, specific heat, kinetic energy, half-lives, atomic structure, radiation, isotopes, Newton's laws. |
| **Biology** 6 programs TOTAL 120k | plant and animal cells, genetics, inheritance, reproduction in man, asexual and sexual reproduction, flowering plants, photosynthesis, osmosis, transpiration, transport, bacteria food classes, diet, alimentary canal, respiration, excretion eye, skin, nervous system, ecosystem, food cycles, fungi earthworm, amphibians, birds, mammals, response. |
| **Computer Studies** 7 programs TOTAL 140k | data collection, coding, storage, processing, presentation, validation, d.p. systems, privacy, security, hardware, I/O devices, software, low and high level languages, machine-code, assemblers, interpreters, compilers, errors in programming, aids to debugging, microcode, machine organisation. |
| **Chemistry** 8 programs TOTAL 150 | Matter states, action of heat and electricity, reaction with air, water, acids alkalis, halogens, oxygen, sulphur, nitrogen, phosphorus, carbon, hydrogen, alkali metals, alkaline earth metals, transition metals, organic chemistry, atoms, formulae, molar mass, equations, ions, periodic table, bonding, gases, metal extraction, polymers, fertilizers. |
| **French** 8 programs TOTAL 160k | Regular and irregular verbs, reflexives, indicative, subjective, passive, infinitive, agreement, pronouns, definate, indefinate and partitive articles, single and compound nouns, adjectives and their forms, adverb phrases, comparatives and superlatives, conjunctions, prepositions, idioms, measurements. |
| **Electronics** 8 programs TOTAL 150k | Energy and its sources, power distribution, e.m.f., p.d., charge, current, power, r.m.s. values, resistors, series and parallel, capacitors, time constants, inductors, transformers, resonance, microphones, loudspeakers, heat and light sensitive devices, diodes, transistors, logic circuits, multivibrators, meters, CRO, amplifiers, feedback. |

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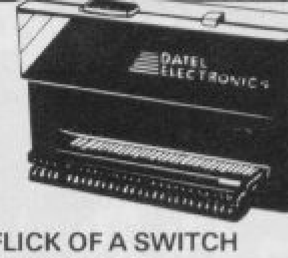
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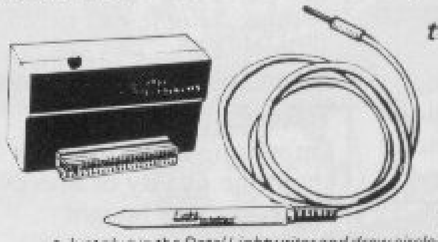
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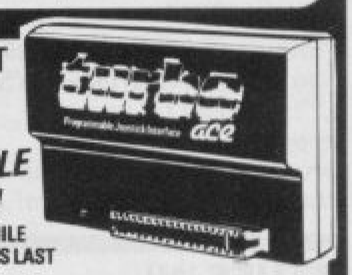



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this". So, frantically typing, I churned out this letter, stuck it in an envelope and sealed it and then made my mum post it — I was suffering from Total Game Stress, so I couldn't go!

By the way, if anyone out there can beat my score, I would very much *not* like to hear from them!

**Andrew Hunter, the next Bruce Lee**
**Battersea, London**

*All I can suggest Bruce is that you very much don't turn to Go For Gold or your nasty attack of Total Game Stress could prove fatal. Ed.*

## PICTURE THIS

Whilst reading my September *YS*, my eye was taken by the offer you ran on the Picturesque Editor/ Assembler. Can't be bad I thought, so I popped a cheque for the necessary and a copy of the news item in the post. This was on Thursday morning. It's now Saturday and guess what's just dropped through my letterbox. Yep, you've got it — or rather I've got it, my copy of Picturesque's Editor/ Assembler.

Congrats to Picturesque for a speedy and efficient service and to put the icing on the cake I got my cheque back as per the offer. Needless to say I have now sent off for the Monitor — at £1 off!

**J A Snagg**
**Whitley Bay, Tyne 'n' Wear**

*Aah, if only all letters were like this. Let's hear it for happy contented* YS *readers and put an end to all this moaning and griping. What d'you mean, no chance? Oh, OK let's get on with the grumbling! Ed.*

## SAVAGE BEAST

I really have had it up to here with all those namby pambies whining on and on about Sinclair Research and how they're now on to their twentieth Spectrum (due to arrive within twenty-eight days from Uncle Clive) because the other nineteen either went up in smoke or went into a permanent state of sulk.

Well, I ask you, is it really Sinclair's fault? No, it certainly is not. The problem is too much pampering. The only language a computer understands these days is violence — a quick punch in the PCB. If my Speccy dared to report tape loading error or some such like, it knows that it would get a swift jerk of the choke chain, and pronto. The same goes for microdrives: I only have the one but the slightest little nibble on a cartridge and he'd be connected up to the mains before you could say Jack Flash. *(Jack Flaaaagh! Ed).*

Anyway, I can't spend all day gossiping, I have a litter of light pens to house train.

**Ian Williamson**
**Bradford, West Yorkshire**

PS Tell that Shaw person to wake up for a minute and tell me how to do fancy border patterns (stripes and so on) and it had better be in Basic or I'll be round with the choke chain.

*OK, pal — think you can frighten me with the promise of the old choke chain, eh? I've been threatened by devils who'd have you for breakfast* (Me f'rinstance! Ed). *Stick this up your user port:*

```
10 BORDER 0: BORDER 0: BORDER 1: BORDER 2: BORDER 3: BORDER 4: BORDER 0: PAUSE 1: GO TO 10
```

*Troubleshootin' Pete.*

## ARE YOU SHAW?

How dare you mock G A D Shaw in *YS* 19 when he wrote in about a number of new games. You're wrong and I should know — I recently bought a copy of *Manic Mooner* in my local off-licence. *(That figures! Ed)*

Also on the stand of budget-price software were the following games. At first, I thought they were a joke too, but after seeing them on a friend's computer, I was convinced. The games were called *Daley Thompson's Supervest, Underpants, Lampshade,* and *Sober Wilf* (Koko's cousin).

I believe that the firms producing the games are trying to 'fool' the public into thinking they're buying reputable games — and although the games are OK, it's still a con!

**Sam H Waghar**
**Barnsley, South Yorks**

*A con, eh? S'pose you'd know, Sam. Funny how you live just down the road from G A D Shaw. Stranger still how your name just happens to be an anagram of Graham Shaw. All coincidence, eh? Plul teh toher oen, ist gto blels no. (anag.) De.*

## ON THE DOLE

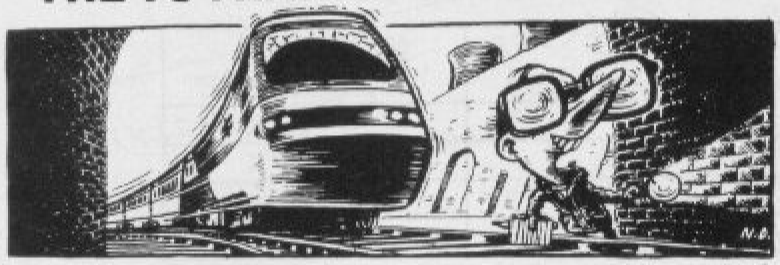
Beep, beep. I claim my trainspotter award. I was scanning your Road Runner road map of (fabaroonee) *Highway Encounter* when it suddenly hit me in the central reservation (ouch!) that there was summit missing. Approximately one hundred beady one eyed meanies missing to be exact. *(One hundred and forty-eight to be exactly exact actually! Ed)*

Just 'cos your art dept couldn't squeeze in all the screens of Zone 0, a hundred meanies were made redundant. It's all jolly unfair to beady one eyed, easy to zap meanies.

**Steve Thrashmore Thurlow**
**Debenham, Suffolk**

*I couldn't agree with you more, Steve. And what makes it worse is that the poor devils ain't got arms, so they can't sign on! Ed.*

## THE YS TRAINSPOTTER AWARD



What I want to know is what has happened to the *Your Speccy* so-called *MEGA* game reviewers? Has Dougie Bern gone soft? Maybe he needs a holiday? (*I doubt it! Ed*) What am I wittering about I hear you cry? Well, I hearby claim the *YS* Trainspotter Award for this month, year, decade, century, millenium and the week after. So there. (*Oh so that's it . . . c'mon out with it! Ed*) You see I was flicking through wunderful *why-ess (Why indeed? Ed)* when I came to *Way of the Exploding Fist.* You will see that it says (and I quote) "You've got to be good to get this far" and if you look closely at the picture, you'll see it's in demo mode. Answer that Mister Ed!

**David 'Eagle eyes' Hosier**
**Christchurch, Dorset**

P.S. I enclose 1p towards TP's salary and 2p for the Ed. (*This creeping gets less subtle everyday. Ed*).

P.P.S. If this letter is not printed I will demand my money back or you will be forced (I've got a big brother you know) to play *JSW* for three months.

*Hey . . . don't push it you. Dodgie's got his own big brother and the pair of them are into real karate never mind* Fist! *Besides, I think the brainblotter's done rather well getting to the demo mode all by himself . . .*

*As for doubling TP's monthly income — shame on you! Don't you know that wealth corrupts the young? So, yeah, alright, mumble-grumble, I s'pose you can have your Trainspotter certificate. But just for a month mind you — we can't get everything right for the next 12000 issues. Ed.*

## JERRY BUILT GAMES

Whilst reading the review of *Dambusters* in your brilliant mag, I noticed a new German secret weapon! The single engined Me110?!

Perhaps the American writers should watch a few more films in which Yankie stars like Burt Lancaster win the war single handed. So, how's about a Trainspotter Award then?

**Christopher Lewis**
**Port Talbot, W. Glamorgan**

*I don't really think you deserve a Trainspotter Award. How about a Planespotter certificate instead? Ed.*

## LITTLE PLEADER

To the Legal Department of YS. Case: Frank Bruno's Boxing. Judge Presiding: Very Honourable Kevin Cox. Prosecution: Me. Defendant: Roger Willis. Crime: Awful review of fab computer game.

In *YS* 18, Mr. Willis, did you or did you not say that the crowd went frantic when he was "left out for the count"? Our evidence definitely proves that no crowd celebrations took place or ever will take place as it is not a feature of the game. The prosecution moves therefore that Willis should serve no less than six months in Rathbone Prison camp.

The prosecution rests on your decision.

**Dennis Carroll,**
**Howwood, Renfrewshire.**

*I think I'll retire to consider my decision* (About time too! TP). *Maybe Roger needs a holiday. Come to think of it, maybe he is on holiday! Ed.*

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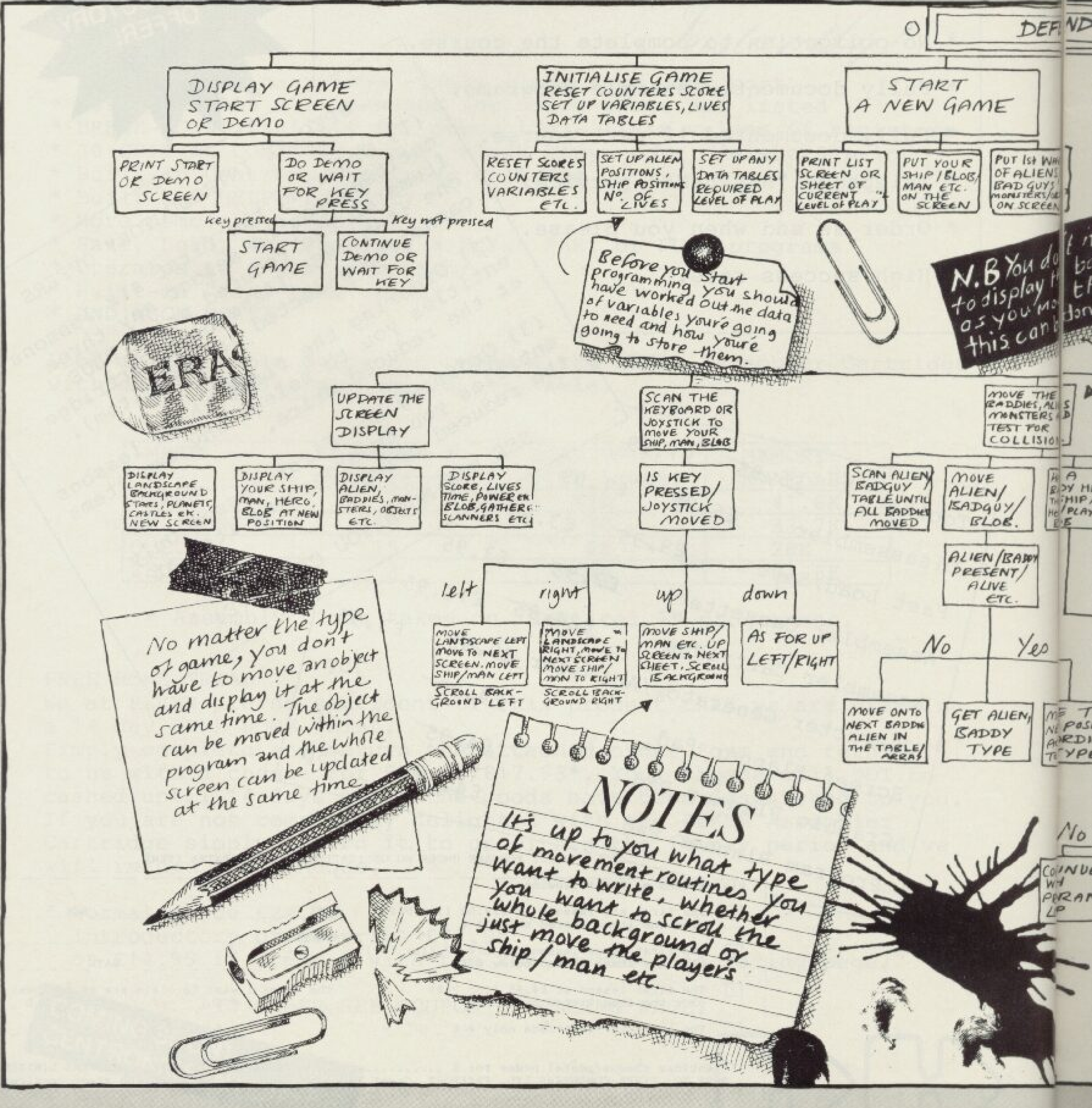
# Game Plan

**_Worse things happen to Dougie Bern than writing for Your Spectrum — you see he's also a professional programmer when we let him have the time off. Now you can learn how he tackles the difficult task of translating his ideas for games into reality. And who knows, perhaps you'll end up writing for YS!_**

What's that you say? You've got the most mega-amazing idea for a new game, eh? It's all about this evil tyrant who wants to take over the galaxy and you're the only one who can stop him and all you've got is your ZX2000 Mk III interstellar spacefighter and it's got these brain-bogglin' 3D graphics and it'll sell simply squillions of copies and, and, and...

Hang on a sec! You haven't written it yet and you never will unless you get your act together. If you've had a crack at it before, you'll know how easy it is to get yourself into a right ol' muddle — and end up not knowing your arrays from your elbow! So, let's take a look at how the professionals tackle the task.

The first job is to get back to that evil tyrant and your great idea for the game. And once you're happy with the scenario, stick to it — write it down in meticulous detail with an exact description of the game and the point of the whole thing. Now we come to the point where a lot of programmers really come a cropper. They get itchy fingers and insist on sitting down at the Speccy and writing code before the program's been clearly defined and thought through. Halfway into it, they find that the program's got a fundamental design fault and there's nothing they can do but start again from scratch. Serves 'em right, I say!



It's a trap that can easily be avoided if you follow the first principles of structured programming. And before you turn the page in terror at those words, let me say that structured programming is not some incredibly mysterious method of writing code but just the opposite, in fact. Instead of writing your game all at once and ending up with the programming equivalent of a plate of spaghetti, you just break it down into a series of subroutines that link together. Every time you want to add to the program, you can just write a new subroutine and tack it on by calling it from one of the other routines. It's a bit like getting an architect in to design a house for you. If you give the job straight to a builder, you'd be well advised to look for alternative accommodation!

## FROM THE TOP

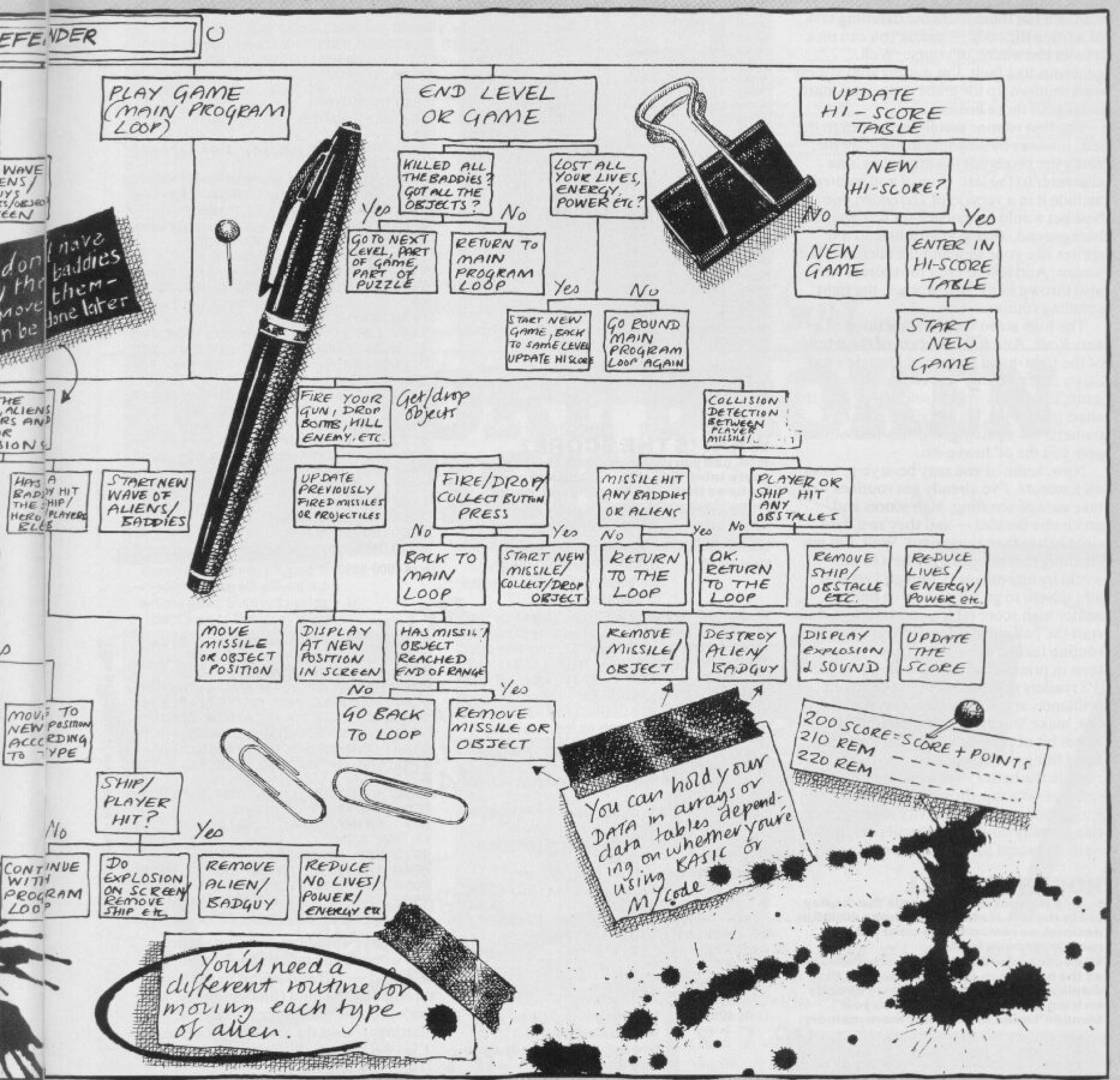
Now the chart below is the programmer's version of an architect's plans. It's called a top-down chart and is the best way of visually representing the structure of a program — far better than a conventional flow-chart. The one here is for a version of that golden oldie *Defender* but the principles remain the same for any game.

So, how do you try this method? Well, if you're really green at the game, it may be an idea to try out the chart below by writing your own version of *Defender*. Make a copy of the chart on to a ginormous poster-sized piece of paper, leaving all the boxes empty. Now start filling 'em with your subroutines. And don't think you've got to write everything from scratch — you can pick up some good quality code that's fallen off the back of a program listing! High score tables and scrolling routines are the place to start — just identify where you need them and slot them into place on your chart. Once you've collected or written all the chunks of code you need, then's the time to sit down at the keyboard and fit the pieces together.

And it's all much the same for any game — base your chart on the one below. Keep subdividing each box into smaller and smaller sections of code until you reach a level where you feel confident that you can write the required subroutine. Course, you'll still come across tricky routines, in which case you can resort to the more conventional flowchart, but do it on a separate sheet of paper.

Once you've started using this approach, you'll be amazed at how quickly it becomes second nature. Look through all the programs that appear in *YS* and you'll soon be able to separate the 'professionals' from the throw-it-up-into-the-air-and-see-where-it-falls brigade.

So, there you have it, a condensed guide to writing megagames. All you need now is that brilliant idea and I'll see you in the Bahamas!



Game Plan

# PLAN OF ACTION

***Now that you've planned out how you're going to approach writing that megagame, it's time to tackle the code. To give you a head start,* Tony 'Slim' Samuels *has come up with some small routines that'll slot straight into your top-down chart.***

So, you've drawn your chart, broken down the separate steps that'll lead to your stardom but there's still the daunting task of writing the code — unless you can nick it from elsewhere, of course. Well, generous to a fault, I'm putting some of my own routines up for grabs so you can start ticking off those boxes.

The first routine scrolls the screen to the left. It works by scrolling the display file, that's the pixels not the attributes, one character to the left. Now, if you wanted to include it in a version of *Defender*, your best bet would be to use it for scrolling the background, after you've taken all the sprites like your ship and the aliens off the screen. And just to even the score, I've also thrown in its twin brother, the right scrolling routine.

The high score table is something of a knockout. And it'll take care of the whole of the right-hand section of Dougie's top-down chart. With it you can enter your name in the spin-round selector or into the chart itself. Plus, if your score is too pathetic for a placing, it'll suss that out and give you the ol' heave-ho.

Now, some of you may be saying, hang on a minute, I've already got routines that take care of scrolling, high scores and much else besides — and they're a darn sight better than these ones. Well, I'm not claiming that mine are the best in the world by any means — though I reckon you'd have to go a long way to find a neater high score table — all I want to do is start the ball rolling. If you've got a little routine tucked away that you've never seen in print before, send it in. Let other *YS* readers get some benefit from your brilliance, and if they reckon you're not so hot, make 'em prove it by sending in a better bit of programming that'll do the same thing. Just remember the shorter the routine the better — just enough to fit into one box on a top-drown chart. Programming is one activity where good things really do come in small packages — well, all except for me, of course!

## ROCK'N'SCROLL

**Here's the routine that scrolls the display file to the left. It starts at address 40000 in decimal, so remember to clear enough room in memory for it.**
**The second routine does exactly the same as the one above apart from moving the display file to the right. It follows directly on from the left scroll routine so you shouldn't need to clear any more memory.**

```
9C40          0010       URG   40000
9C40 210040   0020 LSCRL LD    HL,16384
9C43 55       0030       LD    D,L
9C44 3EC0     0040       LD    A,192
9C46 061F     0050 NEXTL LD    B,31
9C48 23       0060 NXTCR INC   HL
9C49 5E       0070       LD    E,(HL)
9C4A 2B       0080       DEC   HL
9C4B 73       0090       LD    (HL),E
9C4C 23       0100       INC   HL
9C4D 10F9     0110       DJNZ  NXTCR
9C4F 72       0120       LD    (HL),D
9C50 23       0130       INC   HL
9C51 3D       0140       DEC   A
9C52 C2469C   0150       JP    NZ,NEXTL
9C55 C9       0160       RET
9C56 21FF57   0170 RSCRL LD    HL,22527
9C59 1600     0180       LD    D,0
9C5B 3EC0     0190       LD    A,192
9C5D 061F     0200 NXTLI LD    B,31
9C5F 2B       0210 NEXTC DEC   HL
9C60 5E       0220       LD    E,(HL)
9C61 23       0230       INC   HL
9C62 73       0240       LD    (HL),E
9C63 2B       0250       DEC   HL
9C64 10F9     0260       DJNZ  NEXTC
9C66 72       0270       LD    (HL),D
9C67 2B       0280       DEC   HL
9C68 3D       0290       DEC   A
9C69 C25D9C   0300       JP    NZ,NXTLI
9C6C C9       0310       RET
              0320       END
NEXTC 9C5F    NXTLI 9C5D    RSCRL 9C56
NXTCR 9C48    NEXTL 9C46    LSCRL 9C40
*     5E0A
```

## WHAT'S THE SCORE?

**Well, can you come up with a better high score table than this — or think of any features that I've left out? Send 'em in!**

```
 10 REM
 20 REM *SET UP HI-SCORE TABLE*
 30 REM
```

**Lines 10-40** This section sets up the high score table and functions needed for operation.

```
 40 LET S$=" 1ST 2ND 3RD 4TH 5T
H 6TH 7TH 8TH 9TH10TH11TH12TH13T
H14TH15TH": LET W$="ABCDEFGHIJKL
MNOPQRSTUVWXYZ .": DIM I(15): DI
M H$(15,4): FOR F=1 TO 15: LET H
$(f)="-YS-": NEXT F
 100 REM
```

**Lines 100-200** This prints up the table itself

```
 120 REM *PRINT HI-SCORE TABLE*
 130 REM
 140 INK 0: PAPER 0: BORDER 0: C
LS
 150 PRINT AT 0,6; INK 4;"TODAYS
 HIGH SCORES"
 160 PRINT AT 3,3; INK 5;"RANK
   NAME      SCORE"
 170 LET C=1: FOR F=5 TO 19
 180 LET I7=7: LET I6=6: LET I2=
2
 190: PRINT AT F,3; INK I7;S$(C
TO C+3);AT F,13; INK I6;H$(F-4);
AT F,23; INK I2;I(F-4): LET C=C+
4: NEXT F
 200 PAUSE 0
 400 REM
```

**Lines 400-430** No game involved? Well, you'll have to remedy that. But for the time being enter your own score anyway.

```
 410 REM *PLAY THE GAME*
 420 REM
 430 CLS : INPUT "AS YOU CAN NOT
 ACTUALLY PLAY THEGAME,ENTER A S
CORE OF YOUR OWN  CHOICE",c
6910 REM
```

**Lines 6910-7200** If your score is successful, then this is the section that'll accept your name. You didn't make it? Shame, but at least you see the Tough Luck routine.

```
6911 REM *IS SCORE HIGH ENOUGH*
          *FOR THE TABLE*
6912 REM
6990 IF C=0 OR C<=I(15) THEN  GO
 TO 8030
7000 REM
7010 REM *ENTER NAME*
7020 REM
7030 LET EX=0: FOR A=1 TO 14: IF
 C>I(A) THEN  GO TO 7050
7040 NEXT A
7050 LET LE=A: PAPER 0: BORDER 0
: CLS : INK 4: PRINT AT 1,0;" WE
LL DONE,YOU HAVE PLAYED THE

GAME SO WELL,YOU ARE NOW"''"
ELIGIBLE FOR THE ";S$((A-1)*4+1
TO (A-1)*4+4);AT 7,1;"RANK IN TO
DAYS HI-SCORE TABLE."
7060 PRINT AT 9,0; INK 2;"SELECT
 LETTERS WITH iQi AND iAi";AT 11
,0;"KEYS,ENTER LETTER WITH iMi K
EY."
7070 PRINT AT 16,14; INK 6;"AAAA
"
7080 FOR A=1 TO 4: LET W=1
7090 IF INKEY$="q" THEN  LET W=W
+1: IF W>28 THEN  LET W=1
7100 IF INKEY$="a" THEN  LET W=W
-1: IF W<1 THEN  LET W=28
7110 FOR F=1 TO 7: NEXT F
7120 PRINT AT 16,13+A; INK 7;W$(
W): IF INKEY$="m" THEN  GO TO 71
40
7130 GO TO 7090
7140 LET H$(15,A)=W$(W): FOR F=2
0 TO 30 STEP 2: BEEP .002,F: BEE
P .002,30-F: NEXT F: FOR F=0 TO
30: NEXT F: NEXT A
7150 PRINT AT 16,14; INK 5; OVER
 1;"    ": LET I(15)=C
7160 FOR F=1 TO 14
7170 IF I(F)<I(F+1) THEN  LET V=
I(F): LET I(F)=I(F+1): LET I(F+1
)=V: LET V$=H$(F): LET H$(F)=H$(
F+1): LET H$(F+1)=V$: GO TO 7160
7180 NEXT F
7190 IF EX=1 THEN  GO TO 100
7200 GO TO 9999
8000 REM
```

**Lines 8000-8090** It's not the winning that counts but playing the game. Phooey — get out there and give it another go or you'll end up here again!

```
8010 REM *PRINT HARD LUCK ETC*
8020 REM
8030 PAPER 0: BORDER 0: CLS
8040 PRINT AT 1,1; INK 6;"HARD L
UCK, YOU WERE NOT QUITE";AT 3,1;
"GOOD ENOUGH TO ATTAIN A SCORE";
AT 5,3;"BETTER THAN  THOSE IN TH
E";AT 7,8;"HI-SCORE TABLE.";AT 1
1,4; INK 2;"BETTER LUCK NEXT TIM
E !"
8050 PRINT AT 16,8; INK 5;"YOUR
SCORE WAS";AT 18,13;C
8060 PRINT )1;AT 1,9; INK 4;"PRE
SS ANY KEY"
8070 LET A$=INKEY$
8080 IF A$<>"" THEN  GO TO 9999
8090 GO TO 8070
9999 INK 9: CLS : PRINT "END OF
GAME ETC": STOP
```

**This program is available on Digi'Tape**

If you have any short useful programs that would bring everlasting benefit to mankind — and make your name famed throughout the land (unfortunately, we can't promise the princess's hand in marriage), send them to Just Routine, *YS*, 14 Rathbone Place, London W1P 1DE.

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- TOOLKIT features: Renumber with block move or copy; block DELETE, search and/or change (e.g. ALTER apples TO a). 36 User-defined keys. List the variables, list a procedure, list DEF KEYs.
- EDITOR - lets you move the cursor around the screen 10 times faster! And you can move the cursor up and down within edited lines. AUTO, EDIT, JOIN and SPLIT commands.
- LISTINGS with optional automatic indentation of loops, IF, procedures etc. Works on existing programs e.g. you can choose to list:

```
  10 FOR n=1 TO 10: PRINT n: NEXT n
as:   10 FOR n=1 TO 10
           PRINT n
         NEXT n
```

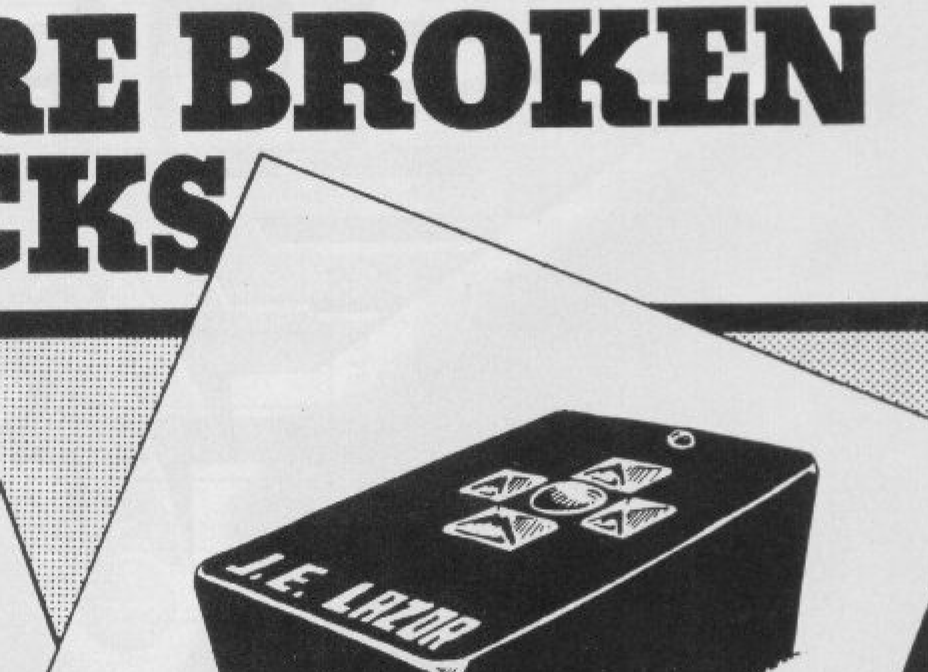
- KEYWORDS can all be entered by typing them in full, or by the "single entry" method, or both in the same line; e.g. the line: 10print"hello":if x=1 THEN goto 100 will be recognised and listed normally.
- Upgrades to Release 1.8 customers: If you bought direct from us, there is no need to return your cassette - just quote the (approximate) original purchase date with your order; otherwise return your cassette and name your supplier. The upgrade price of £6.95 (£7.50 overseas) includes a new manual.
- ARRAY and string handling features include fast INSTRING (100,000 chars/sec) and INARRAY search functions. You can JOIN arrays together, delete, transfer and insert sections, change dimensions without data loss. LENGTH function gives dimensions. Ultra-fast array SORT - e.g. a$(500,30) will sort in about 3 seconds!
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- OTHER FEATURES, new or improved, are too many to describe: DO - LOOP structure with WHILE, UNTIL and EXIT IF; BREAK, CLEAR, CLOCK, CONTROL CODES, EDIT variables, ELSE, GET, KEYIN (programs can write themselves!) multi-LET, (L)LIST a "slicer", ON (works with line nos, procs, etc.) ON ERROR, OVER 2, POKE strings, POP, READ LINE, TRACE, USING, DPOKE. Faster GOTOs, GOSUBs and FOR-NEXT loops.
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[ ] MORE INFORMATION ON ________. I HAVE/DO NOT HAVE RELEASE 1.8 ALREADY. A STAMPED ADDRESSED ENVELOPE IS ENCLOSED.

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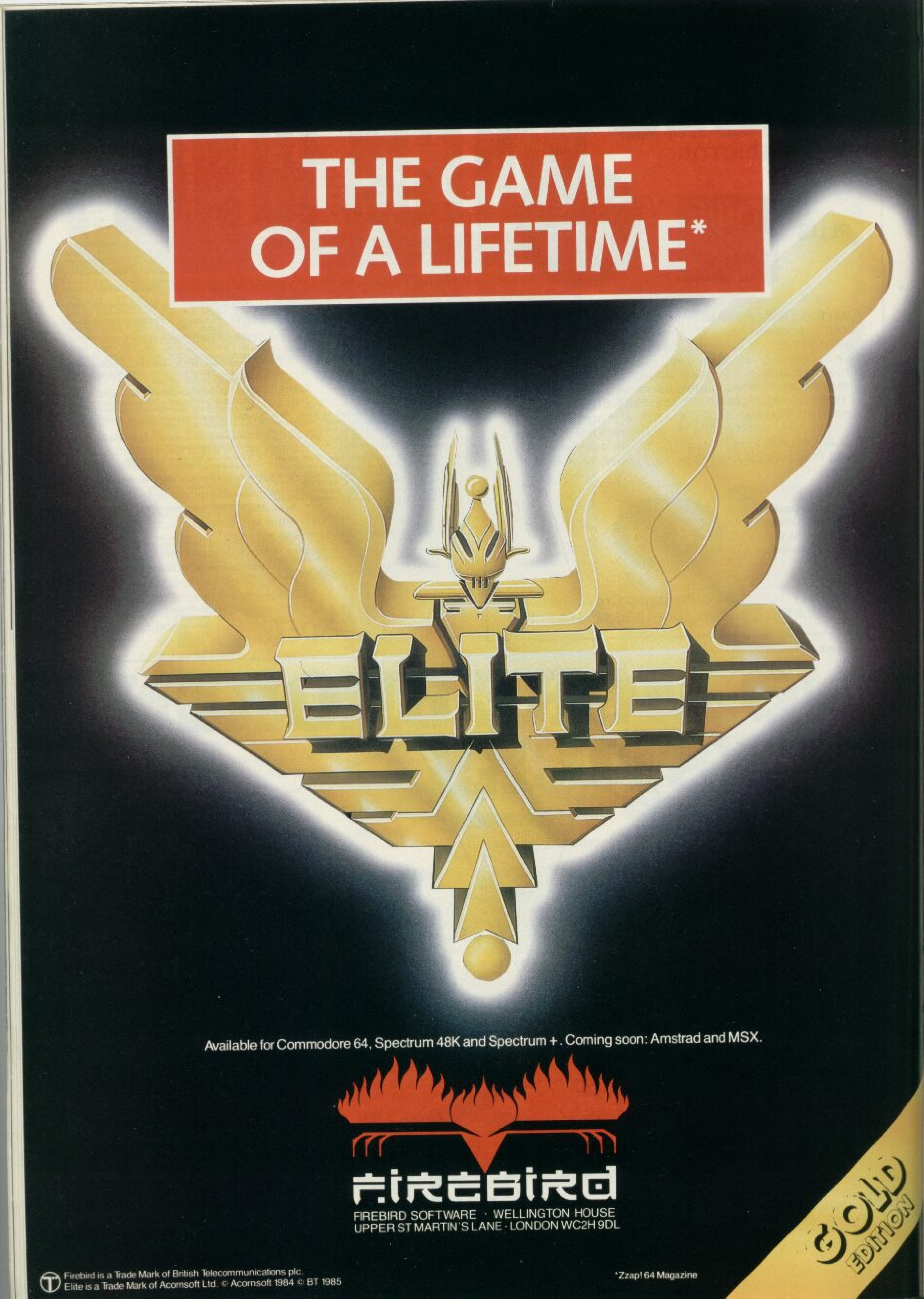
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*Zzap! 64 Magazine

# BETTER BIGGER FASTER

***Speccy Basic compilers have been no big thing but the choice is getting bigger and the packages are getting better. Dave Janda has his finger on the stopwatch . . .***

Wow! Suddenly we've gone from Basic compilers being perverse novelties to having a choice of four or five major products. There's *Mcoder I* and *II*, the new *Mcoder III*, *Blast* (which we blasted in ish 19), Hisoft's new *Colt* compiler and you can still cop hold of Simon Goodwin's *ZIP* which appeared in stages in *YS* issues 3 to 6!

Extended Basics are also right trendy at the moment. Besides our own *YS MegaBasic*, there's Betasoft's *Beta Basic* and Ocean's new *Laser Basic*. But remember these products are enhancements of ZX Basic. A compiler, on the other hand, transforms your original Basic program into machine code making it many times faster. A compiler will never write code as well as you can, so the results won't have the lightning speed of hand-written programs. But you can create fast programs faster with a compiler and you can take all those hundreds of Basic programs you've got sitting around and inject new life into them!

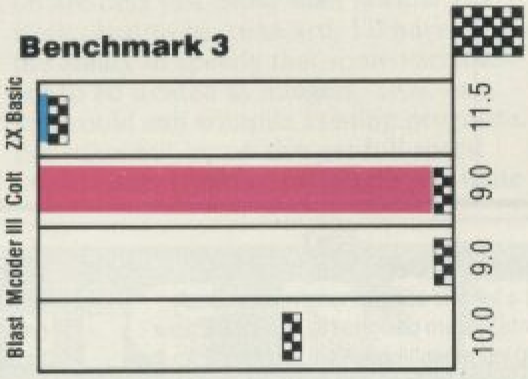
So which compiler should you go for? This is a tricky question as they all offer different facilities and have their own pros and cons. Sorry — but you're going to have to make a difficult choice and you're going to have to make it on your own. Only by working out what you personally want from a compiler will you pick the right one.

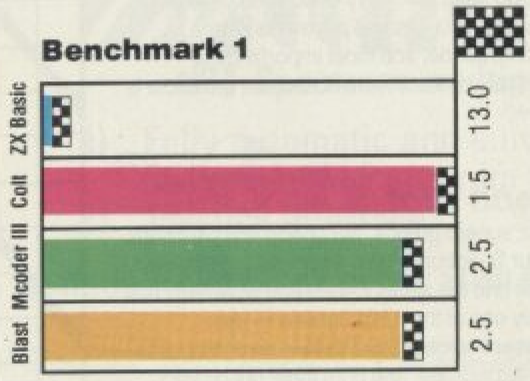
There're three major things to think about: compatability with ZX Basic — will you have to modify existing programs to get them to compile? Can you write and test programs in ZX Basic and compile them when they're finished? Speed is obvious — do compiled programs go that much faster than ZX Basic? Do they go fast enough for the programs you're writing? And, of course, ease of use — is getting a compiled program finished, tested and working too much brain-strain to be worth the hassle?

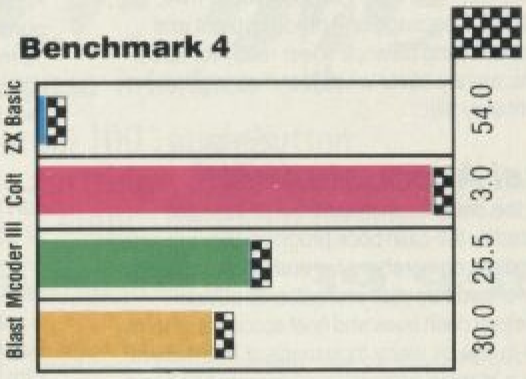
Got your choice buds in gear? Right, let's take a look at the two latest offerings! PSS's *Mcoder III* is a much matured version of *Mcoder I* and *II*. It's

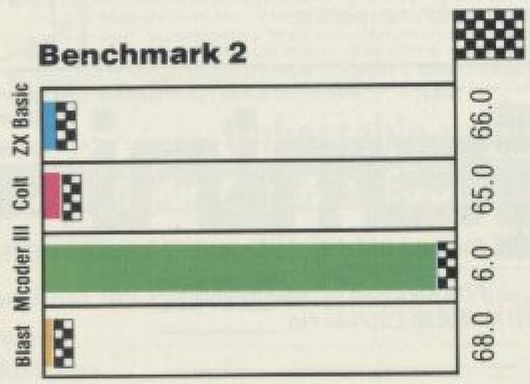
## ON YOUR MARKS...

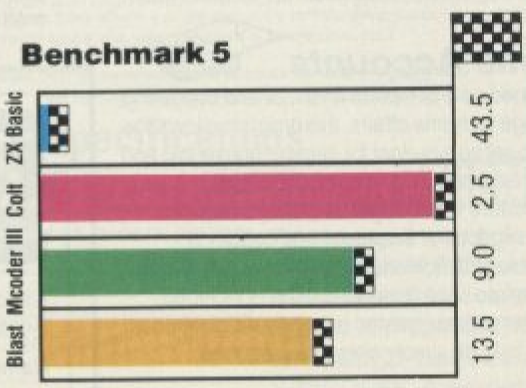
Here's how the three compilers tested compared with ZX Basic. The graphs show their relative performance based on whichever compiler was the fastest at each particular test. The figures at the end of each bar give the actual benchmark timing in seconds.




## COMPILER BENCHMARKS

**Most benchmark programs don't really do practical tests. The short program here (you don't want or need long benchmarks) does five tests which should give a more reasonable idea of how the compilers compare. The program is designed to work first time with all Speccy compilers so don't buy a compiler if it can't run this — it's got problems!**

```
100 PAUSE 0: CLS : FOR c=0 TO 5
: FOR b=0 TO 255: PLOT b,c: NEXT
b: NEXT c: BEEP 1,1
```

**Line 100** Plot across the width of the screen six times.

```
110 PAUSE 0: CLS : FOR b=0 TO 8
7: CIRCLE 127,87,b: NEXT b: BEEP
1,1
```

**Line 110** Draw 88 circles.

```
120 PAUSE 0: CLS : LET a=0
130 PLOT 0,0: DRAW 255,a: IF a<
175 THEN LET a=a+1: GO TO 130
```

**Lines 120-130** Draw 176 lines.

```
140 BEEP 1,1: PAUSE 0: CLS : FO
R x=1 TO 4: PRINT AT 0,0;: LET e
=1
150 PRINT x;: IF e<704 THEN LE
T e=e+1: GO TO 150
```

**Lines 140-150** Print four screens of numbers.

```
160 NEXT x: BEEP 1,1: PAUSE 0:
CLS : FOR x=1 TO 4: PRINT AT 0,0
;: LET f=1
170 PRINT CHR$ (64+x);: IF f<70
4 THEN LET f=f+1: GO TO 170
180 NEXT x: BEEP 1,1
```

**Lines 160-180** Print four screens of characters.

**TELL ME MORE!**

| | | |
|---|---|---|
| *Mcoder III*, £12.95 | PSS | (0203) 667556 |
| *Colt*, £12.95 | Hisoft | (0582) 696421 |
| *Blast*, £24.95 | OCS | (0993) 812700 |

# ..........FASTER

mega-advantage is that it's a floating-point compiler.Just like ZX Basic, you can manipulate fractions and decimal places. Sounds obvious? Most Speccy compilers are integer (whole number) only. This makes them fast but means that many programs need serious modifications before they will compile. Of course, floating-point compilers are slower but take a look at the benchmarks — *Mcoder III* ain't half bad at all!

In the blue corner is Hisoft's *Colt* — an integer-only baby that goes like greased lightning. *Colt* also has a few enhancements up its sleeve — its so-called 'executive' command. While you're changing your programs to integer-only you might as well throw'in a few of these for added vitality.

*Mcoder III* wins the compatability stakes hands down. PSS claims it will compile any old Basic program straightaway. Errr . . . sorry, but not if they use MERGE, LIST or LLIST or the Interface 1 commands; CAT, ERASE, FORMAT and MOVE. The first three are hardly likely to be a problem but it's a shame that the Interface 1 stuff isn't supported. Anyone for *Mcoder IV*?

Since *Colt* can only handle integers, you're going to have to convert your programs to use just whole numbers or fake fractions using several variables or strings. Not a very pleasant task for existing programs but something you can live with when you write new ones. However, you can run both Colt-compiled and normal Basic programs together and pass variables between the two. This is a bit like shutting the door after the program has colted — it's handy but it slows everything down again!

*Colt* does handle some floating-point in commands where it is necessary such as BEEP and CIRCLE. But there are other compatability problems — you can only have single-dimension arrays. Unjumbling all those big tables into single-dimension arrays is a real drag!

In contrast, *Colt* is the speed-freak's friend. A FOR . . . NEXT loop runs about 100 times faster than normal. If you're into those silly and inaccurate little eight benchmark programs used by some megabrained mags, you'll find colted programs on average run around 50 times faster than good ol' ZX Basic. You can squeeze even more out of *Colt* if you disable its 'executive' commands — handy extras that provide error trapping, a real-time clock, windows and sprites — or if you opt to disable the Break key.

*Mcoder III* is slowed down by its floating-point routines. FOR . . . NEXT loops and the like are dramatically improved as are the basic arithmetic operations +,−,/ and *. But more complex maths such as COS, SIN and so on are only just faster than normal ZX Basic. Just to be awkward, I'd have liked the ability to specify that some variables are to be treated as integers. That way, you could still compile existing programs first-time but could also get full speed improvements out of programs you write specifically to be compiled!

As for using the two, *Mcoder III* is something of a shock. The 'manual' is three sides of cassette-inlay card with very little technical info. It's hardly enough to describe a game these days let alone a compiler! To compile a program, you load your original into the Speccy and then load and run the first part of the compiler. When you're prompted, you load and run the second part. This is going to wear the tape out faster than usual — which reminds me, there's no built-in way to transfer the compiler on to microdrive!

*Colt* is much more a professional product as far as the programmer is concerned. It has a built in routine to back itself up onto tape or microdrive and Hisoft won't object if you use colted programs in your own commercial products. It's easier to use as well. Compiled programs usually sit at locations 40000 so you can link them to ZX Basic and machine-code as you will. With the 'executive' removed, Colt will compile whacking great programs — up to 32K in length.

So which one do you choose? *Mcoder III* doesn't exactly offer you new possibilities but it will give your existing programs a kick in the backside. If you just want a two to three times speed increase with no messing about, this has to be the one. *Colt* on the other hand is a welcome new tool for your library — converting existing programs is a drag but if you write stuff especially for it, you should be able to produce some superb programs!

# IMPOSSIBLE DREAM

**Phil South *your mission ... should you decide to accept it ... is to penetrate US Gold's new blockbuster ... discover amazing secrets ... complete the Impossible Mission ... reveal all ... should you fail, you'll never write for YS again ... this tape will self-destruct in 5 seconds ... 5 ... 4 ... 3 ... 2 ... 1 ...***

US Gold has done the impossible itself by bringing *Impossible Mission* to the Spectrum. It's been an all-time smash on the wrong sort of computer for ages. Now, at long last, the perils of special agent 4125 have come home to the Speccy including the same triffic animation, gripping graphics and brain blowing puzzles! *Impossible Mission* reaches a new level in platform games — as well as amazing acrobatics on the platforms and lifts, the skill of outwitting the killer robots, you've got to solve some truly challenging puzzles.

You play the highly-trained agent 4125 on a mission to penetrate the 32 roomed underground fortress of evil Elvin Atombender and prevent him from turning the Earth into a cloud of expanding gas and those little glittery bits you used to get in *Star Wars*. Elvin is a mad scientist and like all good mad scientists, he's surrounded himself with death-dealing robots and concealed the passwords to the door of his lab in the machinery scattered around the different levels. You must search every nook and cranny, juggle the pieces you find and make up the punchcards that will allow you to make your unwelcome entrance into Elvin's laboratory.

Agent 4125 is a highly-trained agent of the calibre of Bond or Rambo. So confident, fit and generally hunky that he can take on Atombender's robot hoards empty-handed — just using his daring and acrobatic skill to keep out of reach of their probing plasma beams. In fact, the only piece of equipment he actually remembered to bring with him is his trusty wrist-mounted MIA9366B microcomputer. This souped-up digital watch has a radio telephone so that you can call up the mainframe computer back at base and get it to help solve the puzzles for you.

But it's not the story line that's brilliant (although it's better than most and there's nothing I like better than a good story line). It's the way the game looks and plays. A lead I picked up suggests that the special agent's movements (running, somersaulting and landing) were 'rotoscoped' — a real person was filmed doing the actions and the sprites drawn from the frames of the film. I don't care how it was done — the results are incredible. Because the animation is so realistic, the game is simply absorbing. You really do feel for poor ol'4125 — his fear, his thrills, his daring. Just like a movie!

*Impossible Mission* is going to be a firm favourite — my Speccy for one is going to get used to loading it up. Your mission, Agent Reader, is to go out and buy yourself a copy. Believe me, it's one of the easiest and most rewarding assignments you'll ever get ...

## OUT OF CONTROL

**Here's your handle on the game — the control panel can be called up whenever you're in the central liftshaft. It provides map and puzzle-solving facilities as well as convenience controls like a pause button ...**

These two buttons let you scan the puzzle pieces you've collected so far so that you can choose which ones you want to fiddle with on the workspace. It's fiddly 'cos you can only see two at a time but what do you expect from a wrist-watch?

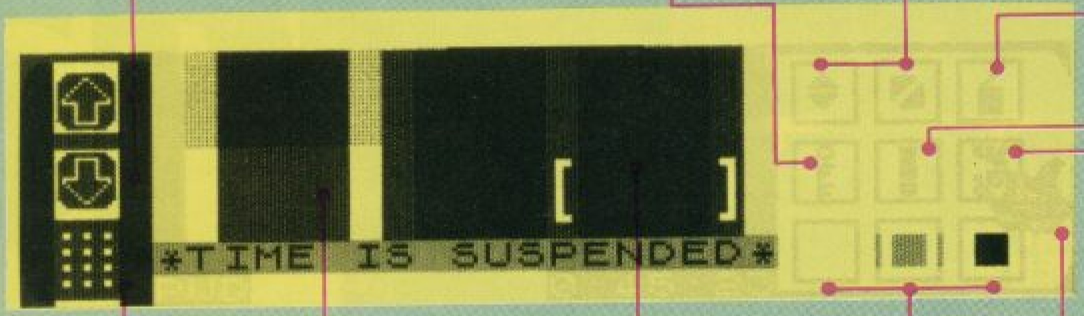
Toggle between the map and workspace by switching the wrist terminal on and off.

Flippin' heck — pushing here will flip pieces top to bottom or side to side so that you can get them to fit together.

Push here to bin the current piece — watch it if you've got an autofire joystick as you might accidentally junk puzzles you've completed!

Chucked the wrong piece away? Hit here to rescue it!

More convenient bits — this freezes the game so you can eat a KitKat in safety.




4125 phone hone — press here to auto-dial the ZX81 back at HQ. It's superior processing power will help you organise the puzzle pieces and tell you if you've got enough to get a punchcard together...

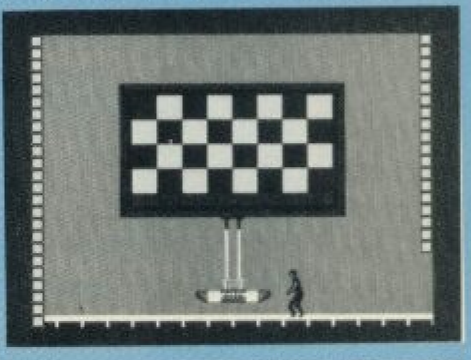
Here's the two pieces you're working on at the moment.

Use the workspace to shuffle, invert and overlap puzzle pieces until they match. The finished punchcards allow you into Atomblender's lab to foil his dastardly plan. When you're not putting the pieces together, this space becomes the map window, showing the relative positions of the rooms you've visited so far.

Use these three buttons to change the colour of the current piece — for two pieces to overlap, they must be the same colour.

This fickle finger is your means of pressing the buttons on the control panel and shuffling pieces around the workspace.

### MUSICAL DIVERSION



**Unlike some recent games, the music room isn't a just red herring to make you lose time. Once you turn to search the device, a pattern of notes is played on the chessboard. Repeat the pattern in order from the lowest note to the highest and you'll win lift and snooze tokens...**

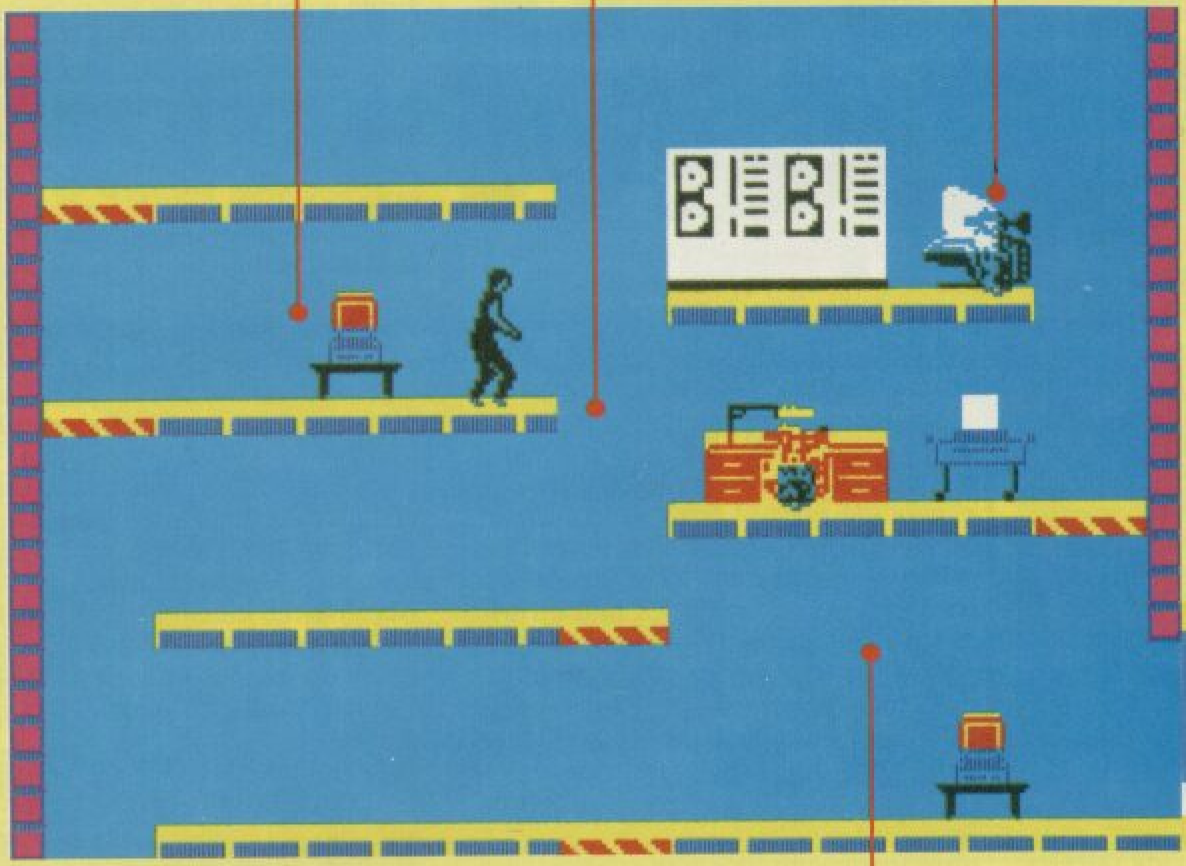
# FORT FOR THE DAY

**Here's just four of the 32 rooms you'll have to explore before you can construct the punchcards needed to penetrate Atombender's lair. Searching any room properly takes precious time and dying at the hands of a robot will cost you ten minutes.**

Search Me! In fact, search anything and everything! All you do is stand in front of an object and push forward. A searching window pops up with a moving line that indicates how long the search will take. Keep an eye on the'bots and be ready to leggit ...

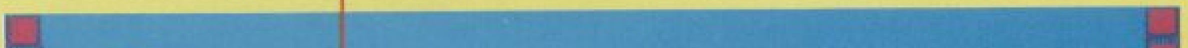
You can walk on air ... if you take a run at it and the gap is no wider than a lift platform. This can be very handy when the floor is full of holes. But be careful, it only works sometimes ... arrrgh!

Yuk ... it's a leechbot! These copy your every move no matter which platform you're on. Avoid a toasting by jumping over them but watch out — they move fast!



Energy build-up is a rare but deadly hazard. Sometimes you'll frazzle up for no apparent reason. What happens is that a timer starts when you enter a room. When it hits zero .... bzzzzt! One way to beat this booby-trap is to use a snooze. But hurry — they don't last long!

Is this robot asleep? No way — it's playing dead until you reach its platform at which point it'll go for you. The way to beat it is rush straight at it (honest) and at the last moment jump over it and dash for the lift before it's got time to turn around.



This type also senses your presence but fires the moment it spots you. This is a bug in the robot's software — it has to standstill to fire so if you keep out of range, you can rifle the furniture in peace.

Here's a boring sentry type robot who just trogs up and down a platform — fires a bit, moves a bit, fires a bit ... What an awful job! They don't sense you and so are easy to avoid especially if you jump them as they turn at the end of their platform.

There are two Security Terminals in most of the rooms. You can log on by pushing forward and then use any lift resets or snoozes you've acquired to reset the lifts or temporarily paralyse the robots in that room...

# WHAT'S BETTER THAN YOUR SPECTRUM?

# YOUR SI




## THE NEW LOOK YS WITH...

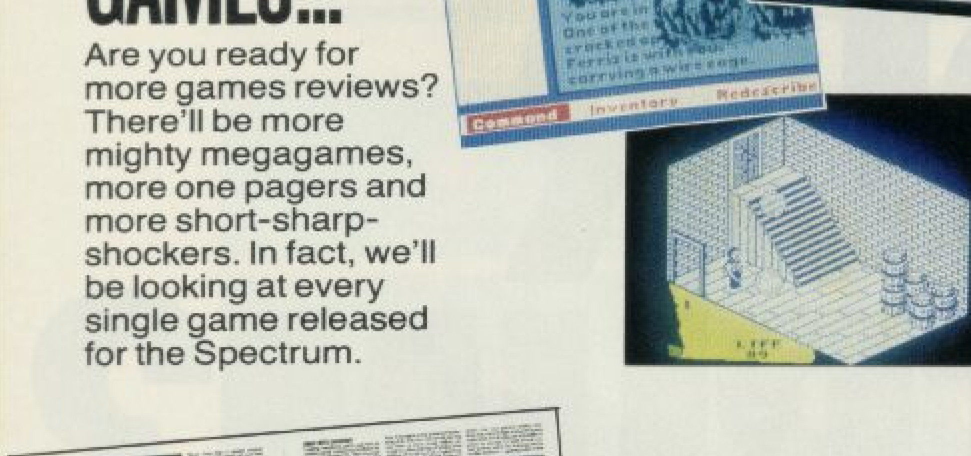
## MORE PAGES...

You'll find almost double the number of editorial pages in the new look *YS* — and all of them packed full of info and fun.

## MORE GAMES...




Are you ready for more games reviews? There'll be more mighty megagames, more one pagers and more short-sharp-shockers. In fact, we'll be looking at every single game released for the Spectrum.




## MORE TIPS, HINTS, MAPS...

If you're already a good player, you'll find all the info you need to turn you into one of the greats! And now there'll be more pages for you to send in the hints'n'tips that'll make your name!



# ...DEC 7

# SOLD OUT? DON'T RUN THE RISK–RUSH THIS TO YOUR NEWSAGENT NOW!

**Don't Miss The New YS!** The demand for the new *YS* is going to be enormous. Imagine it — a 100 page issue with a free games cassette on the front cover. The country could be clean out of copies within a couple of days! So, there's only one way you can be absolutely certain of getting your hands on a copy — and that's by handing this coupon to your newsagent. He'll then reserve your issue — just as soon as he's put his own to one side.

**YOUR SINCLAIR**

To the newsagent: please reserve me a copy of *Your Sinclair*. The first issue is on sale on December 2nd 1985 with a free game cassette on the front cover.

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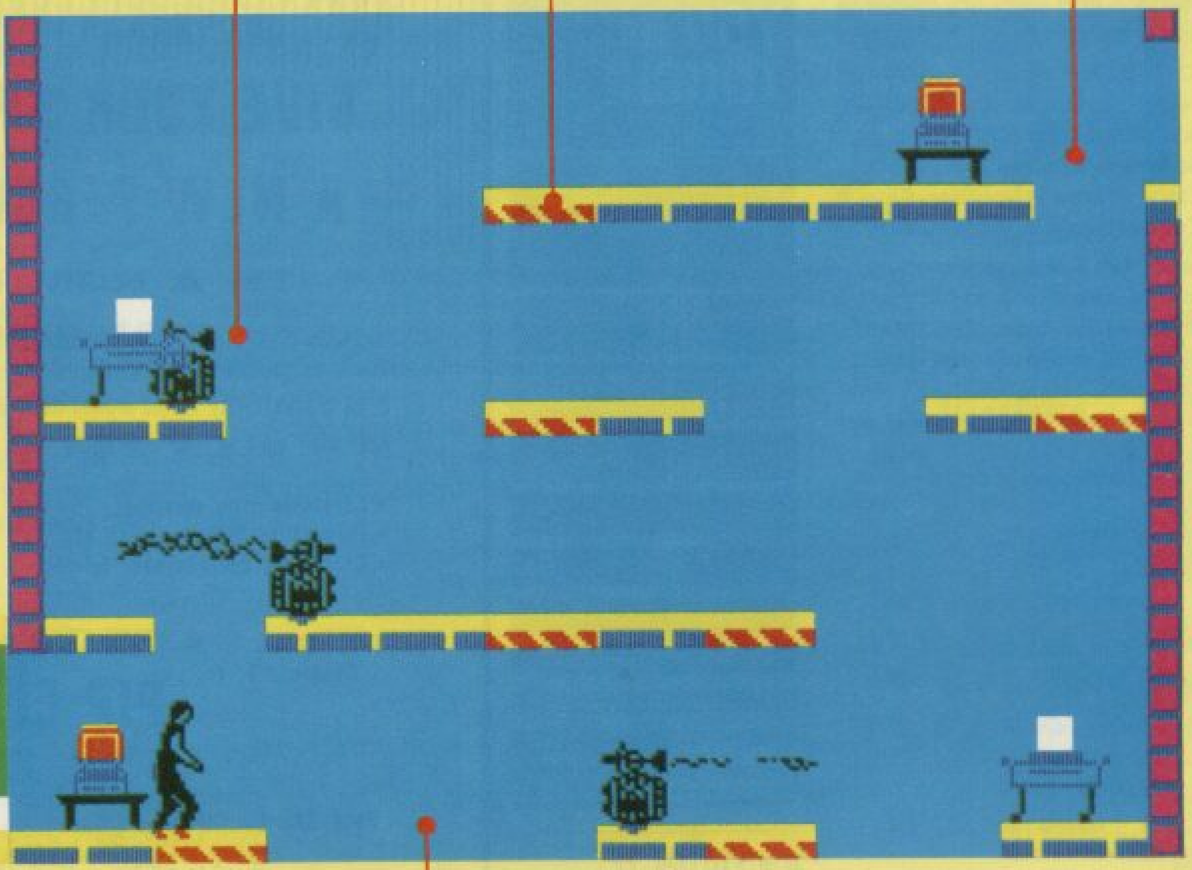
**WHAT ARE FRIENDS FOR?**

Now that you're certain of receiving your own copy of the new look *YS*, why not tell all your friends to do the same. Help wipe out that annoying habit they have of reading over your shoulder! And how else will you stop 'em borrowing your *YS* 'just for half an hour or so, honest' and then not seeing it again for weeks — or worse, pinching your copy of *Rasputin* for their own private power play? There's only one way. Make sure they fill in the form too — it's what friends are for!

Forget trainspotting — you're gonna need to be an ace robot spotter. There's eight different types and contact with any will frazz you. Unless you learn to judge which kind you're dealing with and act accordingly, you don't stand a chance.

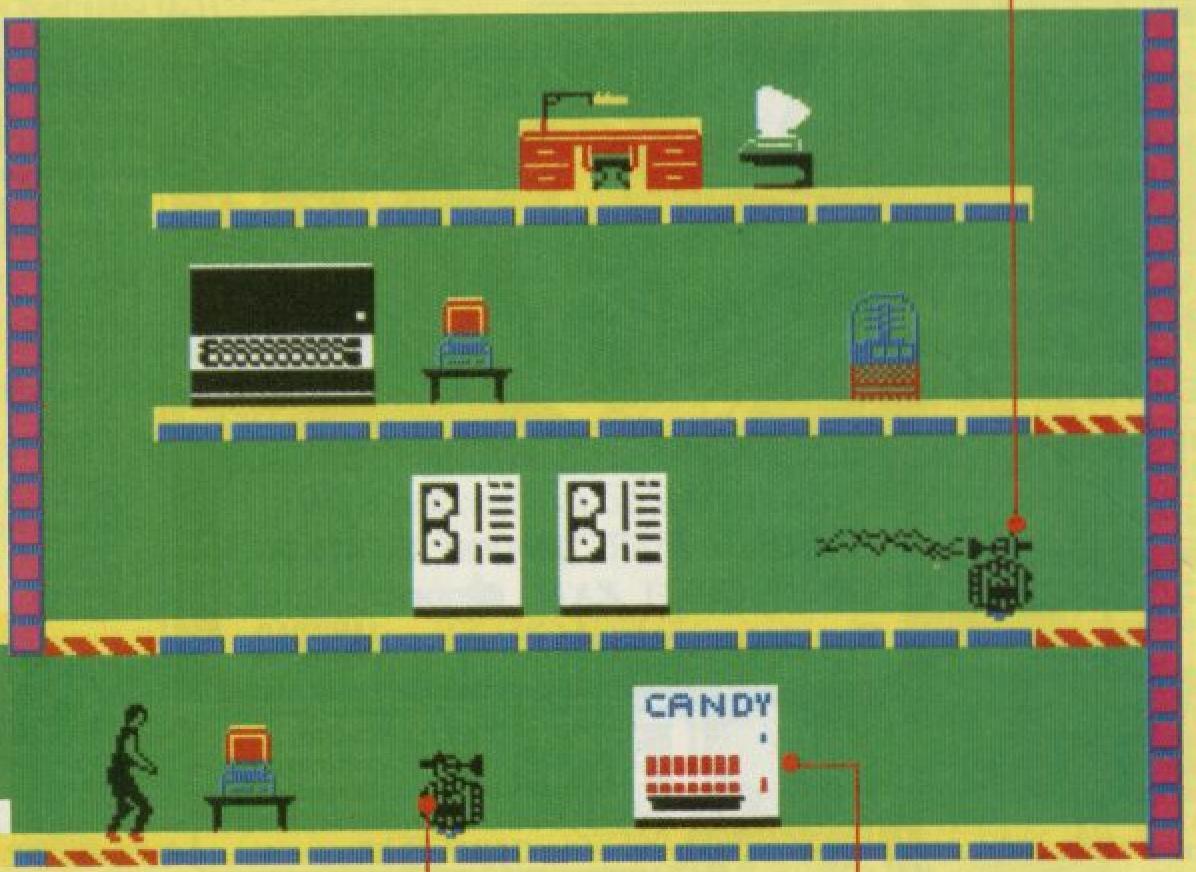
Juggling the lifts can be an interesting puzzle in itself.

Pressing Fire activates your only weapon — a dazzling somersault taking you high above deadly robots and yawning chasms. The chasms are the only things with any time to yawn in this game!



For long jumps like this one, you'll need split-second timing and a long run up. Often you'll only make it by a toe-nail. And sometimes you'll need to tread air a bit before you actually do the jump!

One of the best ways to get past a firing robot is to jump over it as it turns at the end of a platform. Then scarper before he can draw a bead on you ...




● Every time the game is reset, the arrangement of the rooms is scrambled. The furniture and platforms stay the same but the types of robot in the rooms are jumbled as are the positions of the puzzle pieces.

It gets worse ... this type follows your every move and fires at the end of their travel. They never give up so your only hope is to snooze them...

There's all sorts of furniture in Atombender's palace, from computer gear to a candy dispenser. There's even a toilet and — yes — you've got to search that too! Willy where are you when we need you?

FREE NEXT MONTH!

# Rasputin

**Rasputin *from Firebird is the game that has everything. The programmer,* Paul Hibbard, *describes it as a 3D platforms and Pacman style game with a strong plot and a difficulty rating that goes right off the scale. But you don't have to take his word for it — this month you can check out* Nick Davies' *version of the storyboard and next month you can play the game. That's right, there's a demo version* free *on the cover of the new-look* YS!**

Welcome to the world of the evil Rasputin where a battle is about to take place between the forces of light and darkness. You are a crusader, a medieval Time Lord, sent to this universe by the Powers of Light to prevent the spirit of Rasputin, the mad monk, from escaping. But Rasputin has surrounded himself with all that's most wicked in the world and you have only your sword and your shield to protect you.

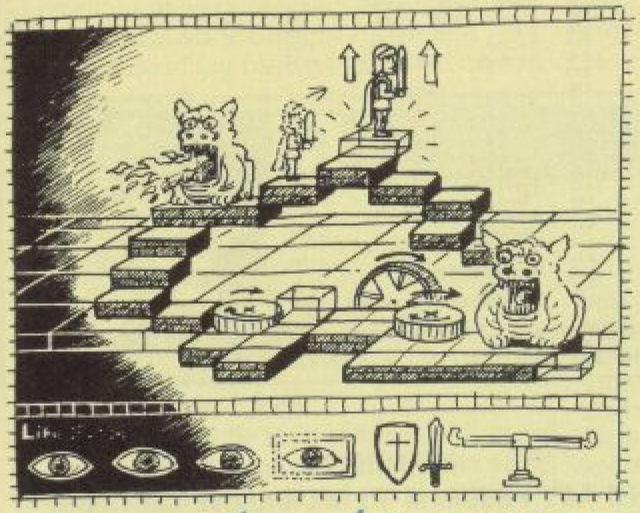
Such is the basic scenario for the game. Whether Paul Hibbard has managed to include all the details of the game exactly as they're shown here is another matter. What is certain from our preview of an unfinished version, is that this is a spectacular 3D-style arcade game that beats anything similar on both speed and style.



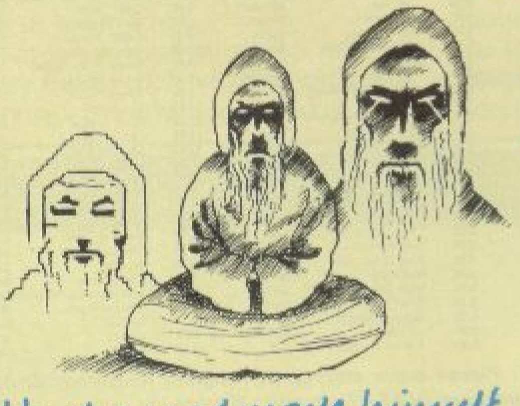
It's the caped crusader battling with sword and shield.



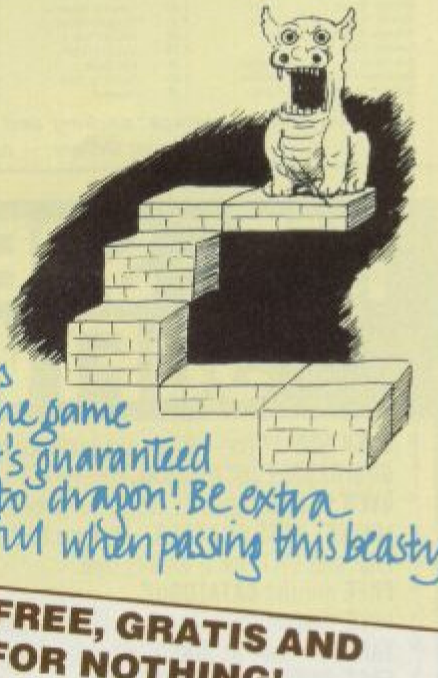
If you fall off the platform you'll fall through space until the clouds bring you up.



Not sure yet if any of these screens will end up looking quite like this- but it shouldn't be too far from the finished product.



It's the mad monk, himself. The spirit of Rasputin floats up casting an evil shadow over the whole game.



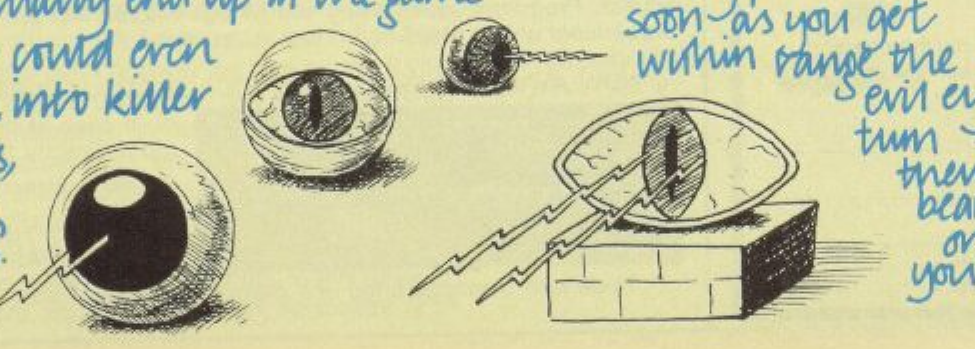
This is one game that's guaranteed not to dragon! Be extra careful when passing this beasty.



Hmmm, these look interesting- wheels within wheels, eh? And they'll be impossible to stand on or jump over.



Beware the Cyclops- if they clip you, comrade, say goodbye to more of your ever diminishing life force.



Not sure what sort of eyes will eventually end up in the game- they could even turn into killer balls, who knows!

The eyes have it- and it's not going to be very pleasant. As soon as you get within range the evil eyes turn their beams on you.

## FREE, GRATIS AND FOR NOTHING!

If you can't wait to check out whether our rough draft of *Rasputin* matches up to the finished game — well, you're just gonna have to! But only for another month 'cos that's when you'll receive a demo version of the game FREE with the new-look *YS*. Whip the cassette off the cover, load it up and check to see whether we got all the details right. Then play the game!

We're not offering you ScreenS or a version that plays itself — this is a fully working copy of a game that'll cost £7.95 in the shops. The only difference is that you'll get to play just four of the forty different rooms. The rest remains the same. You'll die at Rasputin's evil bidding just like in the real thing. You'll succumb to his evil eyes just like in the real thing. You'll burn at the touch of the dragon's breath just like in the real thing. This *is* the real thing — and it's free to *YS* readers!

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# JOYSTICK JURY

***Where do you go for arcade action?* Rick, Ross *and* Dougie *are game for a graft as they tackle this month's hot new releases.***



**FIGHTING WARRIOR**
**Melbourne House £7.95**
**Ross:** Another game continuing the current trend of combats but this one is presented in a refreshingly different style. The game is set in ancient Egypt and includes scrolling backgrounds and an assortment of mythical creatures.

You control an Egyption warrior and your quest is to rescue a beautiful princess held captive by a power crazy Pharoah. To do this you must fight your way past all manner of monsters and half man half animal type creatures to reach the temple where the princess is imprisoned.

The game's very like karate games in that your figure faces to the right and fights all those who cross his path. You carry what looks like a staff which can be wielded in three ways. It can be swung to strike the opponent high or low or thrusted at the middle of their bodies. You can always jump or duck and move forwards or backwards.

All the creatures and your own warrior move very fluidly, behave differently and have varying strengths which makes the game even more interesting.

Unfortunately it lacks a few finishing touches which spoils its playability. The joystick control, for example, doesn't respond to diagonals, you can't back away from the monsters without them advancing on you and the graphics repeat very rapidly. Probably because there's only four or five of them.

The animation and graphics are on the whole superb and the game's a good 'un. It did seem to lack depth and often turned into a session of trading blows, with the winner being the one with the most strength points. It'll probably be a fighting success! **8/10**

**Rick:** The graphics from Melbourne House are getting bigger and brighter all the time. I love it! **9/10**

**Dougie:** One of the best variations on the karate theme I've seen. **9/10**



## DOUGIE'S RAVE OF THE MONTH

**CRITICAL MASS**
**Durell Software/£8.95**
**Dougie: This is the biz! *Critical Mass* is one of those all too rare games that combines some of the tried and tested methods of a golden oldie, *Asteroids*, with plenty of new and refreshing elements.**

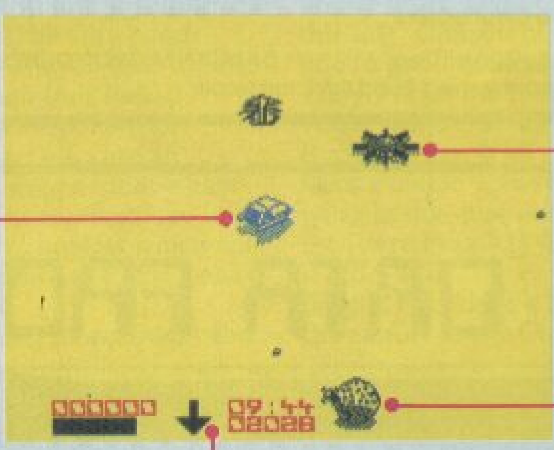
**Far out (*Man? Ed*) in the galaxy, at the outer edge of man's expansion, a colony of humans is under attack — only this time the aliens are being very sneaky about their subterfuge.**

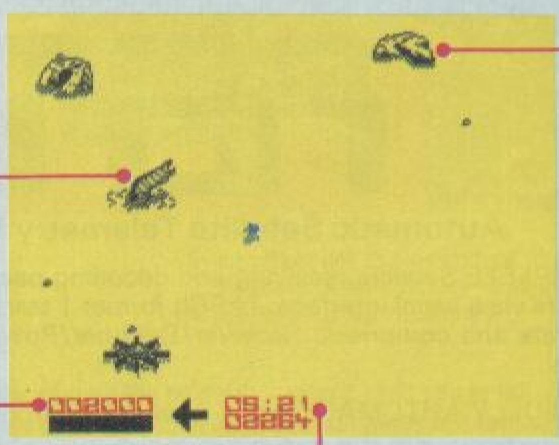
**Now there's none of the old full frontal onslaught — after aeons of playing computer games we humans have learned how to handle that! No, they've sneaked in the back door and captured the colony power supply that's located on an asteroid. It's from there that they're threatening self-destruction unless the colonists capitulate immediately. Stay calm — help is at hand!**

**You have to penetrate the alien defences on the asteroid and disable the anti-matter plant before it can reach Critical Mass. That's the only way of ensuring that the asteroid and everything else within a few billion light years of it, doesn't disappear down an extremely large black hole.**

**You hover above the barren surface of the asteroid in your land skimmer — a tricky task on its own as it's a ground effect vehicle and so extremely hard to manoeuvre. Plus, you must also defend yourself against marauding alien ships, look out for rocks and watch out that you don't run over the land mines. If your ship is hit, it'll eject you just before it's blown to smithereens, so you've a chance to reach a replacement pod. But keep a sharp eye out for the Dune-style worm creatures that come wrigglin' and writhin' out of the sand on the trail of breakfast.**

**The graphics and playability of this game are superb, making it well worth the money. 9/10**



# JOYSTICK JURY




**ASTROCLONE**
**Hewson Consultants £7.95**
**Ross:** Not only is this game a follow on from the arcade adventure *Dragontorc* but also from the *Seiddab Trilogy.* It's obvious innit 'cos it combines similar adventure sequences and arcade action.

In the adventure sequence you control a figure who is on a space station moving from room to room in a search for hidden objects. Control is much the same as in other games except that you can request your figure to perform different actions. Pressing the fire button displays a series of icons that allow you to move the figure around, move both his arms independently and control a laser. Objects can be picked up, carried and dropped with the arms.

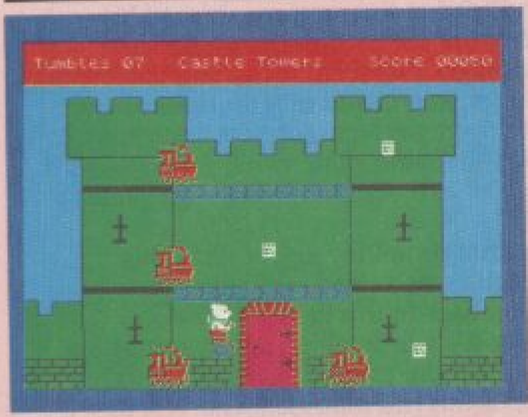
The status area in the bottom centre of the screen displays your laser's energy level, the available oxygen and any objects you're carrying. This part of the game is very similar to other Hewson productions but it does have a few twists.

Well, what about the arcade action I hear you cry. In this section of the game you must gain control of your 24 fighter craft so you can destroy the Seiddab fleet encroaching into various local star systems in a last ditch attempt (we hope) to destroy civilisation as we know it. It plays very like *Defender* which is pretty good considering the memory that it must have been squeezed into.

Hewson has made an excellent attempt at mixing two completely different styles of game in *Astroclone* but I can't help wondering whether this will appeal to the buying public. The question is, do adventurers want to play the zappy bits and do arcade freaks want to solve the puzzles? **7/10**

**Rick:** Oh no! Not another *Avalon* clone!There's no peace for the wicked. **4/10**

**Dougie:** *Avalon* was never in itself state of the art but it has a big following so I've no doubt it will sell by default alone. **7/10**




**RUPERT THE BEAR AND THE TOYMAKER'S PARTY**
**Quicksilva £7.99**
**Rick:** Hey, this one is really *weird* man! See, there's this bear who wears these wacky yanky golfing pants and he can walk, jump and — wait for it — climb the stairs. But he doesn't drink lager, well this is one for the kids, innit?

Rupert (that's the bear's name kids) has got to collect his many invitations to see his even wierder friends Bill the Badger and Podgy the Pig — you know one of *those* parties! Well Rupert needs more invitations than Podgy's had hot dinners, and not only that, naughty toy soldiers and toy trains try to trip him up along the way, though some will be very good sports and help him. They'll need to 'cos you have to go through four linked screens for each of the eight levels.

Unfortunately Rupert also has an embarrassing speech impediment which means all the screen instructions are in dum-di-dum rhyming couplets which will maim many an innocent ear to the power of poetry.

The toymaker's castle, its corridors and castellations were presumably built by Barrett — or does that reflect the quality of the graphics? Rupert does look quite a lot like he did in the comic, though some wish he'd stay there. Oh, and he still wears that scarf to hide his love bites.

Quicksilva hasn't aimed so much at the mega-tots but their spinster aunts who feel that if Toby or Fenella have to have one of those awful computer games then this safe, competent platform game is the one to get. I'm afraid though that little Toby will be out on the corner with that vulgar Wayne doing a deal for a quick Buck Rogers. **4/10**

**Ross:** Frankie goes to the toymaker's party in this cute number. Not as good as the (dare I say it?) Commie version, but it'll do. **6/10**

**Dougie:** Frankly, I'd still prefer a copy of the annual in my Christmas stocking **4/10**




## RICK'S RAVE OF THE MONTH

**THE CUSTARD KID**
**New Generation £4.95**
**Rick: Well scroll on, New Generation's *Custard Kid* is the one to play with your spotted dick — if you see what I mean. The *Custard Kid* is a variation on the old favourite *Willy Wonka and The Chocolate Factory*, but this time Our Kid, who shows no yellow streak and is certainly not one for the Birds, has to search a custard factory to find 12 recipes. Funny I only know one way to make the stuff — open can, pour into saucepan...**

**With over 600 locations it wouldn't just be Laurel and Hardy who'd enjoy the custard pie potential of this game, which incidentally has a 'find an object and save it for a rainy day' facility. If you wanna be a successful cordon bleu of blancmange you'll have to do the mapping yourself!**

**You're in a bit of a sticky situation 'cos you gotta search the scrolling yellow corridors before you go for the chests with coloured keys. These keys are used to open certain rooms, one of which may contain the custard detector. You'll also have to fill up with milky victuals to keep the stamina up. Only then can you pass to the green corridor to look for those illustrious recipes.**

**But you'll need a lotta bottle to search those chests — they might contain the yellow peril — the feared custard monsters or even worse the custodians of the custard who'll send you to jail. Along the way a few useful items can turn up — money to bribe the guards, spoons to devour the custard monster, whose help might mean a grapple with a globule isn't Kid Custard's last stand.**

**Non-sexist, non-racist and very very violent (and extremely messy) this is one for jelly and ice cream and good games freaks everywhere. 9/10**



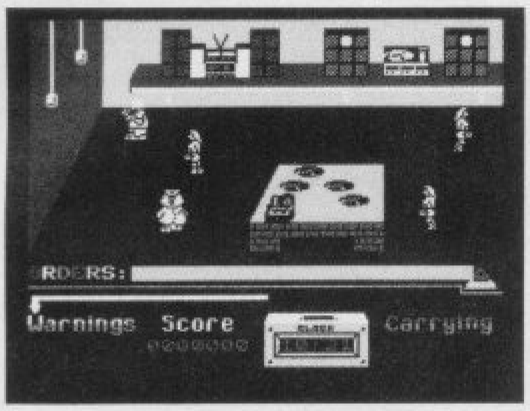

Keys aren't reusable but doors once unlocked stay unlocked. Once a key has been put in a door, the appropriate window turns black.

If it moves, it's dangerous. One false step and you could be reduced to a bottle of St Ivel Five Pints.

Custard features can only pick something up if he's not already holding something. Fortunately, his cavernous pockets hold a great deal ...

The milk bottles show how much life you have left ... and no, milking the cow just doesn't help!

Every screen has its closed chest. Walk over it to discover what's inside — it could be a key, a nastie or even a copper!




**GRUMPY GRUMPHREY SUPERSLEUTH**
**Gremlin Graphics/£7.95**

**Ross:** Poor ol' Grumpy Gumphrey. It's a hard life being a store defective — especially when you're getting on a bit and you reckon it's about time to take things easier. I mean, the shoplifters are getting younger and it's hard to spot them if the old eyes aren't what they used to be. On top of that the boss is out to get you, as he thinks you're a lazy old beep and he's got you running errands all over the place. So you'd better be on your toes 'cos as soon as you put a foot wrong, you're out on your ear, P45 an' all!

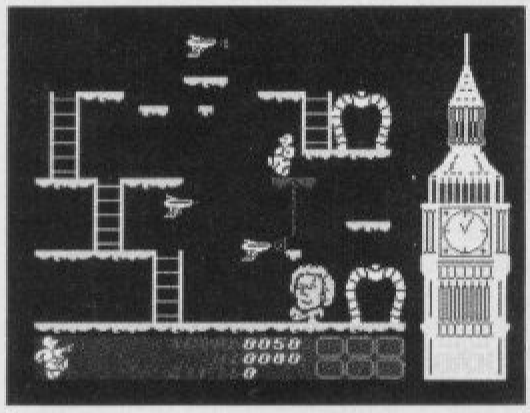
Your day at the store starts at 9am. Not only do you have to catch any shoplifters but when the boss says jump, you *jump* — and you'd better not be late with his tea. In between times, you'll have to cope with floods, fires and even an escaped gorilla monkeying about in the store.

Playing the game is pretty simple, although the controls aren't exactly responsive and the lifts between floors are prone to get stuck sometimes — I haven't sussed out if that's a feature or a gremlin.

Overall, this game's not bad but it feels as if there's something missing — not fun but perhaps addictiveness. I certainly don't think you could class it as one of the Gremlin Greats. **5/10**

**Dougie:** For a complex 3D game, I'm amazed at how they've overcome the colour problems. Get's my vote on that alone. **7/10**

**Rick:** So, Gremlin's taken the leap off the platforms into something altogether different. Out of the frying pan? 'Fraid so. **5/10**



**BIG BEN STRIKES AGAIN**
**Artic/£6.95**

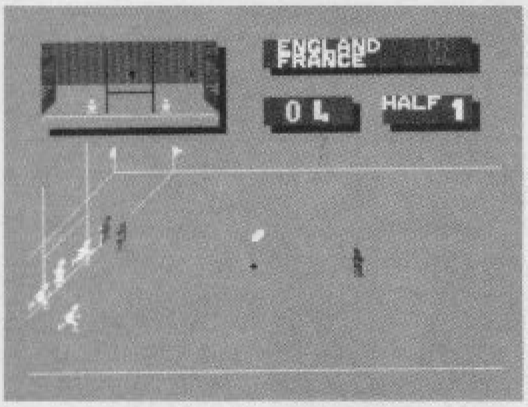
**Ross:** Big Ben Strikes Again, or does he? Bungling Ben, the hopeless hack from the Chronicle, has just received a report of a leak in Parliament. So off he bumbles down to Westminster for the scoop of the century — or that's the theory anyway!

As Ben you've got to chase around the House looking for the six politicians who'll help you unravel your story. There's no doubt that Spitting Image would certainly be proud of the caricatures of the leading MPs! But you can't just go charging up to them and expect them to hand you the story on a plate. Oh no siree, you have to collect gifts for them in exchange for their snippets of information. Like all politicians they just love to be pampered! Hurry though, you must have your story before Big Ben strikes twelve. Perhaps you've never seen the wrath of an editor when you hand in late copy — it starts 'em foaming at the mouth. (*Grrrr! Ed*).

One of the best features of this game is the screen editor and designer that's included in the program. It's strides ahead of some of the game designer packages I've seen. It lets you completely re-design and add new features to any of the twenty screens, so you never have to play the same game twice. Give it a go if you're into designing your own games. **6/10**

**Dougie:** Hmm, the age of flickering graphics isn't dead — thanks to a comeback in this game. **4/10**

**Rick:** It's worth taking a look at this one if only for the cracking caricatures of our illustrious (ho hum) leaders. Whether it's worth playing is another matter. **5/10**




**INTERNATIONAL RUGBY**
**Artic/£7.95**

**Ross:** I say chaps let's have a game of rugger — at least it's a real man's sport. None of your wimpy *Everyone's A Wally* stuff for us, eh? Right, on with the shorts and on with the matcho.

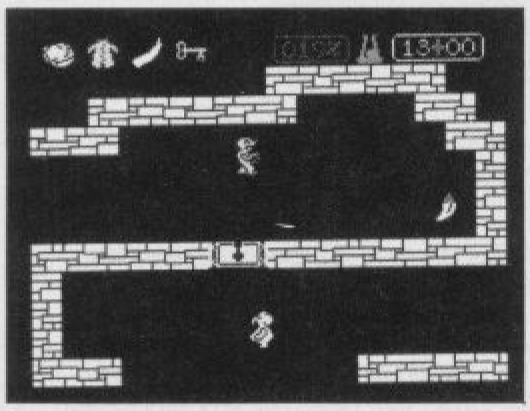
*International Rugger*'s another sport simulation of the type that's so popular at the moment. We're here for the Home International Rugby Tournament with the choice of siding with England, Scotland, Ireland, Wales or France. And your job? Even a rugby player could wrap his brain cell round this one — you just have to win the Triple Crown or the Grand Slam.

You have the choice of playing by yourself or against the computer and you can make it hard or easy on yourself. There's everything you'd expect in a real rugby game — drop kicks, tries, conversions, line outs, scrums, the lot except for bruises and broken bones!

And if you don't know a rugby ball from a ball bearing, don't despair — you can always give it a go on the practice mode. For a sports simulation, the graphics and the playability aren't up to the standard of, say,Imagine's *Basketball*, but then that's a completely different ball-game. If you're a rugger fan then you'll still have fun chasing the ball around the screen. **5/10**

**Rick:** You control these little people three pixels high, bearing no resemblance whatsoever to rugby players — and I loved it! **7/10**

**Dougie:** You control these little people three pixels high, bearing no resemblance whatsoever to rugby players — and I hated it! (*OK, who's been looking over whose shoulder? Ed*). **4/10**



**RIDDLERS DEN**
**Electric Dreams/£7.95**

**Dougie:** Riddle me this. My first is in arcade and my second is in adventure. What am I? (*D'you really want me to answer that? Ed*), *Riddlers Den*, of course. this is an arcade game that plays like an adventure.

So, instead of rushing about like a headless chicken through loads and loads of rooms (that all look much the same) and collecting as much treasure as you can before you run out of energy, you'll have to get the ol' grey matter into gear. Otherwise you're not going to get far at all. Not that you can't rush about like a loony if you want to — there's even a bank where you can stash your loot.

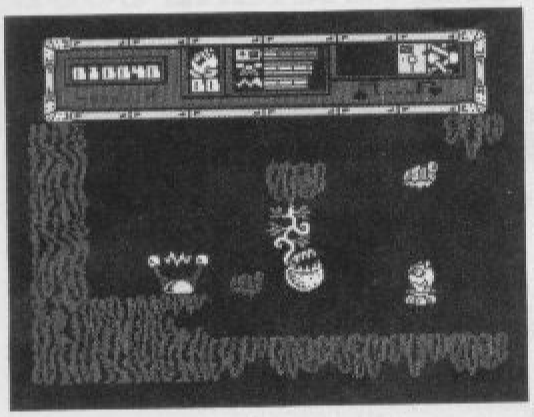
Your task is to get your mitts on the Golden Tusk, but don't expect to come close without a lot of brainache. And just to make life interesting, there's a full complement of goblins and ogres, dragons and gargoyles, plus a raging bull and a giant spider.

Just like in a true adventure you can only carry a certain number of objects that can then be used only at certain times or places. Overall, *Riddlers Den* is both absorbing and frustrating at the same time — it's just a riddle why other games can't reach this sort of standard! **7/10**

**Ross:** Who could resist playing the part of a cute little elephant in search of the Golden Tusk. Great graphics make for a great adventure. **8/10**

**Rick:** Good riddlance to this! It had me going flat out on my tasks for the tusk. **7/10**

# JOYSTICK JURY



**STARQUAKE**
**Bubble Bus Software/£7.95**

**Dougie:** Great galactic gargleblasters, an unstable planet has just emerged from a black hole and the galaxy is gonna go Boom unless you stop it!

As BLOB (Bio-Logically Operated Being) you're the man for the job, the man in the know, so off you go. *Starquake* is a mega-massive arcade adventure in the *Sabrewulfe/Nodes of Yesod* mould. All you have to do is save the galaxy from total destruction — so c'mon, by now that should be a complete doddle.

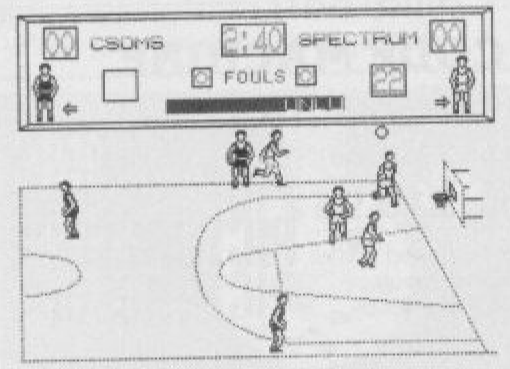
For openers, you must find your way about the inside of the planet, locate the missing pieces of the core and rebuild it. En route, you'll come across a whole host of objects that'll come in handy including your flexible friend — Axes or sumfin!

I'm reliably informed that there are 512 different screens in *Starquake*, but I can't verify this as I ran out of fingers and tootsies! There are also over twenty different monsters and fifteen teleports — only one problem, you have to find the correct teleport codes and I've been sworn to secrecy. (Used notes only please, in a plain brown wrapper.)

If you're into arcade adventures, *Starquake*'s one of the best around at the moment. And you don't even have to take your brain out of neutral to play it. **7/10**

**Ross:** If it weren't for Ultimate, I'd say this game was totally original — but then Ultimate does exist! **5/10**

**Rick:** This matches, even beats the standards of most games. Now it's cracked the technique, perhaps Bubble Bus'll have a go at coming up with some fresh ideas. **7/10**




**WORLD SERIES BASKETBALL**
**Imagine/£7.95**

**Dougie:** Watch out, the Globe Trotters are about. Keep your feet on the beat and the ball on the bounce!

We can all name sports that haven't translated at all well into computer games, but *Basketball*'s one of the exceptions. As soon as the players come bounding out onto the court you can tell that this game's better than your average offering. All the men are well animated and move smoothly around the screen at a speed that must have the sprite routine working overtime.

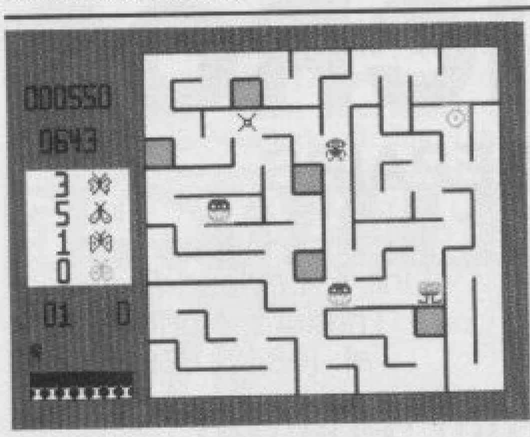
You can play *Basketball* against one of your buddies or against the computer. Each game lasts six minutes and is divided into two halves of three minutes each (*Cor and how else might they be divided? Ed*). If the outcome's a draw, you're given another thirty seconds to battle for those baskets.

You'll find controlling the players is a touch tricky at first so it's just as well there's a practice mode for improving your dribbling skills and passing techniques. Once you've got the hang of that, you're in with a good chance of taking the computer to the cleaners. But you'll have to maintain very accurate passing and shooting before you win.

*Basketball* is not only fun but it's also one of those games you keep coming back to. Net yourself a copy! **8/10**

**Rick:** Done 'emself proud, has Imagine! This is a worthy follow-up to *World Series Baseball*. **9/10**

**Ross:** Imagine's certainly making a name for itself with this series of sport simulations. What d'you mean it made a name for itself once before! Still, a goodie. **8/10**



**MAZE CRAZE**
**Partyline £6.95**

**Rick:** I s'pose it makes a change from painting the town red. Partyline's *Maze Craze* could cause a yellow fever of excitement if you've never been dazed by a maze game before. Otherwise there's little here that an awayday to Hampton Court couldn't provide.

The game is simplicity itself. And the more simple you are the more you'll enjoy it. You've got to guide your man about the maze, choosing a level of difficulty between one and nine depending on how much you like wriggling your wrist.

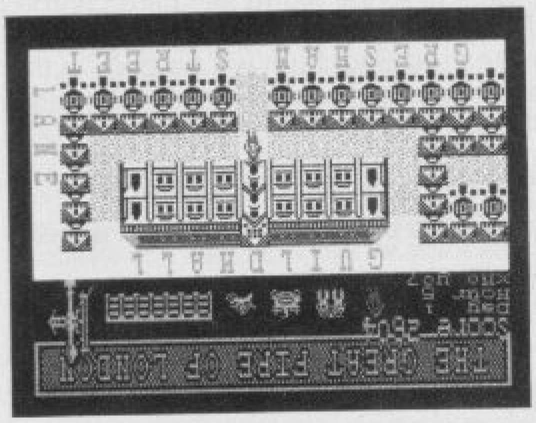
As the man progresses he'll excrete something yellow to colour the maze. You better be quick though 'cos one of the beastly beasties has a taste for this sort of thing (rabbits do something similar, I believe) and he'll gobble up your trail.

On leaving the yellow brick road you've to collect moths of various value whilst avoiding the statutary plonkers and munchies! The moths get reincarnated and die as quickly as interest in this game and if you catch a frog or a bug you can enter one of the four special mazes.

Here the 'ugly bug ball' continues and pretty terrifyingly for those in awe of arachnids. 'Cos here comes a spider to sit down beside yer — and only a kamikaze dive with the poison bottle can save you. The khazi isn't the first place I'd despatch this game. Little 'uns who like pulling the legs off spiders or zapping flies in the microwave might get a kick out of it. **3/10**

**Ross:** Urrrgghhhh! **0/10**

**Dougie:** Even if the game's a pile of old dross you've got to give it to Partyline for being brave enough to release it. **1/10**



**THE GREAT FIRE OF LONDON**
**Rabbit Software £3.99**

**Rick:** Rabbit Software takes a few Pepys into the past (*Groan! Ed*) with a re-enactment of the Great Fire of London. 1666 style, that is, not the summer of '81 or the autumn of '86. Forget all that stuff about it starting in a baker's shop in Pudding Lane because Alfred burnt his cakes while watching a spider. This fire can start anywhere and if you choose the variable wind option this bright spark of a burn-up will need some fast thought and action if it's to be extinguished.

Don't be diverted by the flashing graphic depicting the fire — even if it does look more like a stroboscope.

Essentially this is a strategy game with a degree of maze built in. A pretty accurate scrolling map unfurls as you, the mayor, frantically beetle around mobilizing water pumps, demolition gangs and gunpowder men to deploy in a complete frenzy to contain the conflagration.

All in all a thorough quick-fire strategy game, which, if not exactly hot stuff has no obvious defects and might give you something to do other than fiddle while London burns around you. **6/10**

**Ross:** Not quite state of the art programming but it's addictive and a pyromaniac's dream **8/10**

**Dougie:** Being a Scot, I didn't half enjoy burning London down! And I'm sure everyone would enjoy seeing parliament go up in smoke! **8/10**

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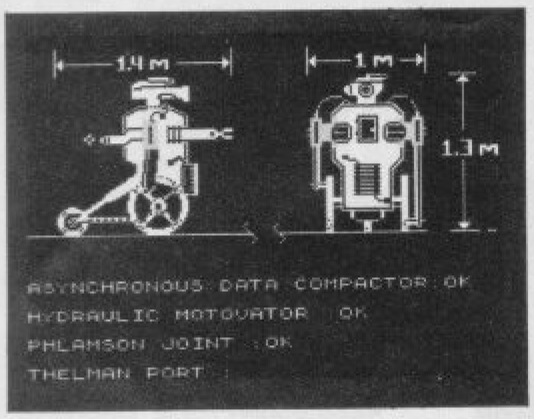
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# JOYSTICK JURY




**HACKER**
**Activision/£7.95**

**Dougie:** Phew, my brain hurts! A trifle perplexing this little number — the only instructions on the packaging tell you how to load the program. Nothing else, zilch, zero...

Panic not — we've already pieced together the plot. It seems you take the part of a computer hacker who's just about to finish off a night on the phone. But then he accidentally dials a wrong number and the intriguing words LOGON PLEASE appear on the screen.

Of course, you're an experienced hacker so you try all the normal passwords — FRED, HELLO, GUEST and so on — all to no avail. No problem though, 'cos after you've tried to log on three times, the program lets you into the system anyway.

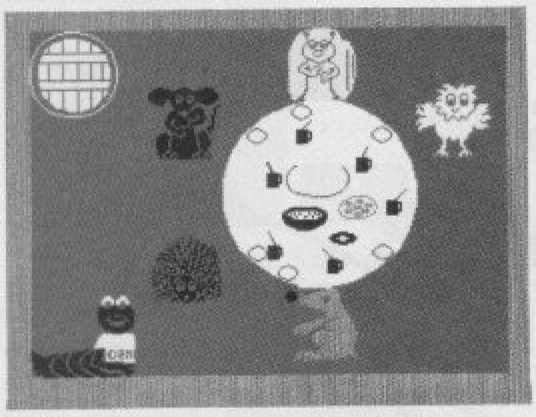
So, we're in and we're off! And the first thing you have to do is complete a laser test on the SRU (Subterranean Remote Unit). It's a trifle tricky at first, but once you discover the Infrared Video Image Sensor, then the Asynchronous Data Compactor, the Hydraulic Motovator, the Phlasmon Joint and the Thelman Port are a doddle to find.

Now, the plot thickens as you discover that you're in the computer of Magma Ltd. The firm has discovered how to use the Thermal Differential of Magma as a virtually unlimited power source. And with that, world domination is only a matter of days away. It's your duty as a citizen of the free world to stop them. And as much as I'd like to help you with more info — well the cheque from Magma to stop me talking came in handy.

This is definitely a game for those of you who like pitting your wits against the machine **6/10**

**Ross:** A very clever idea that'll let you get the feel for hacking. I'm just not sure whether Activision's pulled it off. **7/10**

**Rick:** A great game that lets you avert an astronomic catastrophe without incurring phone bills of astronomic proportions. Well, how'd you like to be cut off in your prime? **8/10**



**ORM AND CHEEP — THE BIRTHDAY PARTY**
**Macmillan £6.95**

**Rick:** *Orm and Cheep* doesn't exactly roll off the tongue like Starsky and Hutch or Arfur and Tel but they're the teeny heroes of the TV screen. Macmillan are definitely aiming this little offering at the under eights. However, in the best tradition of Watch With Mother (or Dad) this game is well presented and requires enough thought to allow oldies to play along too.

The game starts with a reaction test which will determine the ability level you start on. A memory test follows with Cheep, a flighty little thing, having to choose the ingredients for Orm's (the caterpillar with the gorms) birthday.

Cheep, the chatty little canary, then has to round up all the guests for the party too. Hedgehog, snail and mouse can be found through a simple maze which even has signposts to help the lost. Mole's underground tunnels are a little more complex and require some mapping out — all good practice for a budding computer buff. It's not that easy though you've got to avoid those nasty baddies the cat, crow and rat whilst you search.

Once the gang's all there they have to be seated in the correct chairs. Having achieved that, the crow turns up and causes a kerfuffle — so you have to start again. Never mind. The program cunningly adjusts the skill level the more accomplished you become.

Good, clear and colourful graphics, excellent sound effects and unpatronising instructions and attitude toward the younger user all go to make this a solid starter and, dare I say, educational game. **8/10**

**Ross:** Takes you back to your childhood, dunnit? Shame about Cheep's broken wing though ... **7/10**

**Dougie:** Educational software always seems to have the best graphics routines — why can't other publishers get to this standard? **8/10**




## ROSS'S RAVE OF THE MONTH

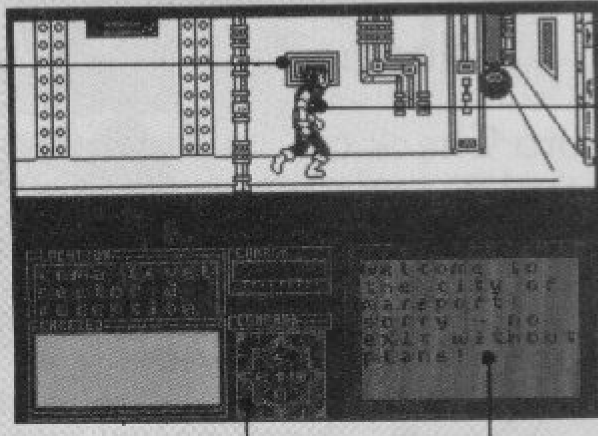
**MARSPORT**
**Gargoyle Games/£9.95**

**Ross: So, this is the first in a trilogy, eh? Well, if this one's anything to go by, you can stand by for a real treat. And don't be put off by first impressions — sure, this game looks very similar to Gargoyle's previous offerings, *Dun Darach* and *Tir Na Nog*, but the scenario and the problem solving are very different.**

**The year is 2494 and once again those nasty alien, space invader thingies (these ones are called the Sept) are trying to get their slimy claws on Mother Earth. Your mission is to prevent the impending catastrophe. So, you must penetrate the city computers on Marsport where the aliens are holed out and escape with the plans for a force field to surround earth. No problem, as they say...**

**Well, I've got news of you — it ain't that simple. Not only do you have to find your way around Marsport but you've got to do it without being blasted away by the baddies. Start off by mapping your progress — this'll help you find the objects you're gonna need if you stand a hope in hell of penetrating further into the base. It's also the only way to prevent that dizzy feeling you get from going round and round in circles, like I did before I got the hang of it!**

**The graphics are beautifully animated, the controls are excellent and it's great fun to play. And if you're into sci-fi, like me, you'll enjoy it even more. An all-round winner that's well worth lashing out the megabucks on. 9/10**



The lifts move you between levels but you've no control over where they stop. So it's easy to get lost or worse — you could end up on a level where the computer's defences are activated!

Take a good look around any new corridor using the camera function. You can only see one wall at a time and it's easy to miss something vital on the opposite wall.

All too much for you? Nip into one of the Mars Bars for a quick drink.

● Rule One: Make a map or the maze of corridors will beat you everytime.

Keep your bearings with the compass — otherwise you can wander for daze!

Early warning system: this screen will tell you when the bad guys are about to make an appearance...

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*... or they would be if the dastardly Hood, arch-villain and mega-lomaniacal maniac, hadn't got to them first. He's enveloped Tracey Island in a cloud of amnesiac gas and, er ... sorry, almost forgot what I was going to say there ... oh, yeah, and now none of our five valiant heroes can remember anything, no, not even who owns which Thunderbird vehicle. The Hood plans to turn them into puppets of his evil intent and if they resist — well, he'll just string 'em up!*

*Now they only have one hope left — you! Can you remember who goes where? Should Virgil be shooting into space or splashing about at the bottom of the sea? At the moment, he can't even remember where he's put his keys. They're relying on you to pull a few strings and come up with the answers. You don't want to appear a dummy, do you?*

*All you have to do is connect up the team with their craft. So, if you think Scott's in Thunderbird 4, draw a line between the two. And as a reward for your help Firebird has generously agreed to send a copy of its new game, Thunderbirds to the first thirty readers who send in the correct solution. It's really the least you can expect for helping the team in the triumph of good over Hood!*

### STRINGS ATTACHED

*Entries should reach us by no later than December 31st 1985.*

*Each entry must include a completed form or a photocopy of it.*

*Entries will not be accepted from employees of Firebird or Sportscene Specialist Press, their printers, family and friends. You're also ineligible if you're related to Mr Tracey and the boys.*

*The Editor's decision is final and no correspondence will be entered into — well, you didn't think he could write, did you?*



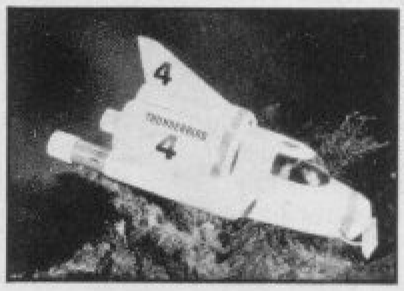
Gordon



Thunderbird 2



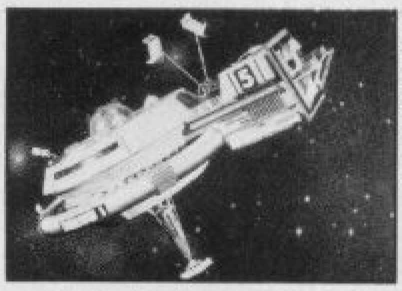
Virgil




Thunderbird 4



John



Thunderbird 5



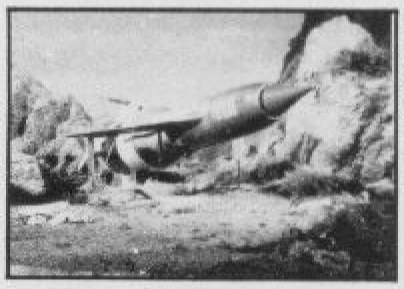
Scott



Thunderbird 3



Alan



Thunderbird 1

Gee Mr Tracey, I know where your boys should go— and to help you out I've connected up the piccies. Here's where you should send my reward for saving civilisation as we've seen it on TV ... So, don't string me along — puppet in the post pronto!

*Name*.................................................................

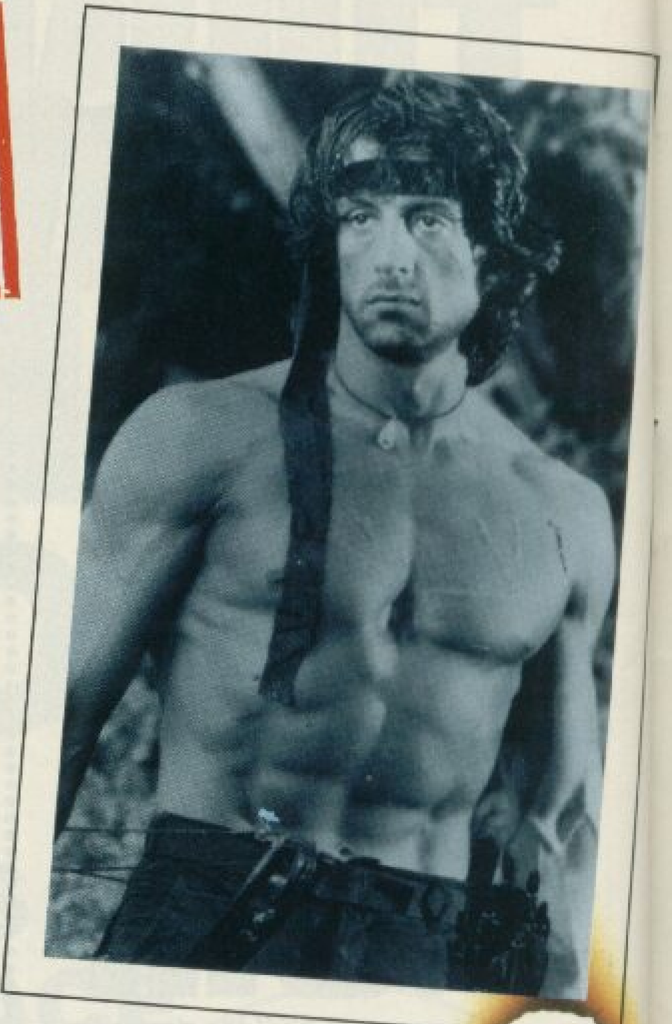
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Now cut out the coupon (or a photocopy of it) and send it to Thunderbirds Compo, *YS*, 14 Rathbone Place, London W1P 1DE.

# RAMBO



**Peter Shaw — *no man, no law, no war could stop him. Flown to the far north-west and dropped behind enemy lines. His mission — to discover how well Ocean is coming on with the game based on his troubleshootin' rival,* Rambo!**

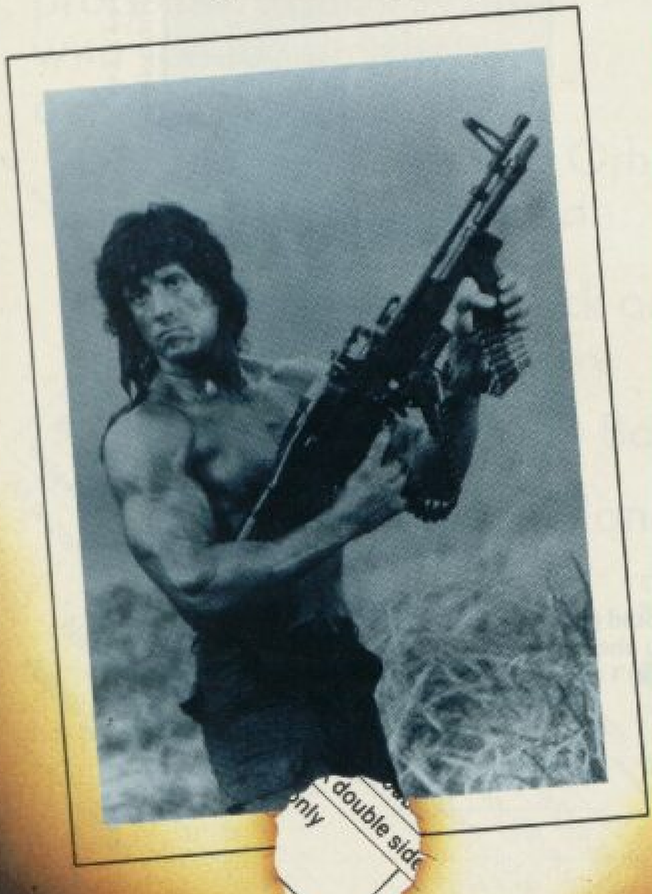
All hell has broken loose. Ack, ack, ack... A chopper swoops in low, spitting machine gun fire. Shadoom, shadoom! The enemy bazookas explode just feet from their target. There's swamp to the left and soldiers to the right. The flames, the heat... the jungle is a blazing furnace, a riot of fire. And in the centre stands one man... John Rambo.

Just how do you capture that on a computer game, you ask? Well, from what I saw when I went up to Manchester to visit Ocean, I'd say they were doing a darn good job — against all the odds. After all, games based on films haven't so far been acclaimed for their fidelity to the plot, or even the spirit of the originals. *Rambo* is the exception and there's a very simple reason for that. *Rambo,* the film, is, after all, just a shoot 'em up. And shoot 'em ups still make some of the most successful Speccy games.

If you haven't seen the film or been following Rambo's exploits, here's a quick run-through of the story so far. John Rambo has been locked away for the crimes he committed while waging his own personal war in Vietnam. Now, as *Rambo*, the film, starts, he's been offered re-instatement to the army — but there's a price. He must agree to go on one more mission.

Rambo must return to 'Nam and take photos of the prisoners of war who still remain, locked up and almost forgotten by the country they fought for. But one thing is made very clear — under no circumstances must he engage the enemy. But how can you tame a man like Rambo? All that pent up fury and frustration inevitably leads him to disobey orders — and in the game, your role as Rambo requires you to do the same!

And so, John Rambo is dropped into the steamy jungles of South-East Asia close to the POW camp where he'd previously been incarcerated until his escape. This is the beginning of your operation as Rambo...



## WRITIN' RAMBO

The Speccy version of *Rambo* is being converted further north than even Manchester — yes, all of us softy southerners will be amazed to know that such places do indeed exist! The work's being carried out by Platinum Productions, the same team that did such great stuff on the Speccy *Dambusters*. Of course, at the time of writing they can't guarantee that all the details I gleaned about the game for this preview will make it to the final version — but you can be sure they'll do their darndest, to try.

David Anderson is in charge of the operation north of the border, while back in Manchester, chief programmer, David Collier and stooge Tony Pomfret share the weighty task of designing *Rambo*. David, 26, has already designed *Roland's Rat Race* with 19 year old Tony. They both say that their designs come about after much verbal violence until a happy medium is reached — or one of them conks out. Sounds very much like *YS* to me!

## WORKIN' OUT

*Rambo* is a big game. It covers an area three screens wide by about thirty screens high, though the main play area is contained within the bottom fifteen. As you move to the left and the right, the screen scrolls half a page at a time but as you go up and down, the screen goes with you. You'll be able to see this scrolling technique first in *Beach Head II* — also converted by the very talented programmers at Platinum Productions.

Each screen is divided into fifteen different sections and each one can contain an object — a tree, a shack or some shrubbery, for example. Using this method, the programmers can save a screen in only fifteen bytes of memory. The scope this gives to *Rambo* is bigger than Stallone's biceps!

At any one time, there can be sixteen sprites active on the screen and this should be done with very little loss of speed. That spells an awful lot of woodentops you're gonna have to take out in the game before you achieve your objective.

And finally, a feature that the game designers, David Collier and Tony Pomfret, are very excited about is the weaponry selector. Each armament has its own special graphic and distinct flightpath and you can flip through the choices offered by your arsenal at the touch of a button — even while you're engaged with the enemy in a spot of the old killing and maiming!

**So, you wanna be Rambo? Well, prepare to go on the rampage. And to help you out, just study our step-by-step — or should that be yomp-by-yomp — guide. And if you can't wait for the game to come out, you can always give it a practice run in the back garden!**

(L)

Made it! Fly this way and your mission is over. It may not have been strictly to orders but what the heck — you've made a fan of Ronnie Reagan and that sure is a high score!

(K)

Wow, so you're still going strong! Now all you have to do is rescue the remaining prisoners locked up in the cell-in-the-hill and take 'em home to mom. But don't expect the sentries to give up until every man jack of 'em is dead.

(J)

Prepare for the choppiest chopper ride you'll ever have. Surely, you didn't think you'd be alone up there? You're gonna have to fend off the attacks of another chopper — and this one's from a rival firm!

(I)

Way up north of where you started you'll find a helicopter in a clearing — it's your ticket on the cheap chartered flight Southbound. But first you're gonna have to overcome the guards with extreme prejudice — yeah, kill 'em Rambo!

(E)

As soon as you're inside the camp, the guards'll make their move. Watch 'em jump out of those huts. It's no use pussy-footin' around now. From here on in, it's a case of if it moves kill it — unless it's one of the prisoners you've got to rescue.

(C)

Here's the swamp — and like most swamps it's pretty impenetrable. If the fever don't get you, the mozzies will! It seems that it's been put here so you have to go round via the Buddah but if you think the programmers are handing it to you on a plate — well, you haven't played it yet!




MARK WATKINSON

(H)

The idea behind the game's so simple even Rambo could understand it. The more violent you are, the more points you score. So, after you've thrown the chopper off your tracks, why not shoot up the shrubbery? — it all adds up to a good score!

(G)

Now the enemy's real mad — and they're after you in a big way. It's here in the paddy fields that the attack from the air begins. And as you're on foot, you're gonna have to be quick — and don't go tripping over the vegetation. You either go to hell or get the hell out of there!

(F)

Over here you'll find your first prisoner — and the poor devil's bound hand and foot. To save him from further torment, you only have to cut him down. No, not with your machine gun, stoopid.

(D)

Right, you've made it up to the barbed wire perimeter fence. Now you're going to have to bring in a bit of brain power to work out which weapon you should use to break through. Your bow and arrow won't be a lot of use, the machine gun'll bring in the guards too soon, so that only leaves the knife. Quick, quiet and very, very effective!

(B)

Behind the Buddah idol, you'll find a machine gun — snap it up but don't use it. Why? 'Cos it makes too much noise, and noise attracts soldiers — that's why!

(A)

You're dropped into this area by plane. All you have with you is a knife and a bow'n'arrow and they're not much cop for a killing machine. So, you'll find the rest of the equipment you need scattered around the rest of the map.

passport, tickets and [illegible] me.

# SPECTRUM ADVENTURES

***The game in Spain falls mainly as a pain and we knock the spots off Adrian Mole. . .Teresa Maughan lived to tell the tale. . .***

**The Secret Diary of Adrian Mole Aged 13¾**
Mosaic/£9.95



**The Secret Diary Of Teresa Maughan Aged 23¼**

**Oct 11th 1985:** I received a copy of Mosaic's new game, *The Secret Diary of Adrian Mole Aged 13¾* today. The Ed insisted that I write a review — he said he'd give me £10 but then he's always been a bit tight.

**Oct 12th 1985:** I took my first look at the game today. It's Adrian's diary on the screen with a few graphics thrown in.. It's Max's (the errand boy) birthday today.

**Oct 13 1985:** The game doesn't seem very intellectual to me — all you've got to do is press keys 1, 2, 3, 4 or Caps/Shift to play it. Even I can do that, well nearly. Troubleshootin' Pete thinks it's dead brilliant and plays it all day long.

**Oct 14th 1985:** Censored.

**Oct 15th 1985:** Being somewhat of a megabrain I've already read *Adrian Mole's Secret Diary* so the game seems a bit repetitive — not for intellectuals! The Ed said I was fat. I told him it was probably because he forced me to sit and play computer games all day.

**Oct 16th 1985:** I don't think much of this game. First it says Adrian goes on holiday with Maxwell and the stick insect and then a week later he meets the stick insect for the first time. I think I'll ask Max if he can explain this reasoning to me.

**Oct 17th 1985:** Being a connoisseur of the arts I am of

# GIVE US A CLUE...

Norsewoman of the Year, **Lorraine Weir** has just completed *Erik The Viking* and has decided to let you lot in on a few secrets. To get to the North Sea from the beach you must go West four times and then South seven times. You can then reach Denmark by going East and to enter the church type: PRAY TO THE TOMBSTONE. Some objects have pictures on them such as the Book, Bracelet, Stewpot and Medallion. If you have the Ragbag, stand on the deck and rub an object with a picture on it — you'll then appear at that location after you open the bag. So, don't look a gift Norse in the ... Sorry!

Seems a few of you are still having trouble with *Eureka.* Never fear, **Dan Johansson** from Sweden is here with a few hints. He says you must pick up the flint and the rib bone and use these to make an axe. Then go West from the river and you can use it. What you use it for is a complete mystery since Dan didn't tell us!

**Paul McPherson** has been having some fun with *Sherlock.* He's succeeded in stealing bodies, losing Lestrade, getting the cabbie to pay him £60 *(Sounds sensible to me. Ed),* and locking Basil Phipps and Daphne Stracham in a safe. Wow!

First you must take the lamp, wait for Watson to read the newspaper article, go to platform three at Kings Cross and there you should find Lestrade. Then go to Leatherhead by train. Once you've arrived give the lamp and your money to Watson, so you should then be carrying nothing. Take the bodies from Sandstone Bridge and Jones' lounge and place them in Cobden Lane.

Having done this return to Kings Cross and wait for Lestrade to appear. He'll call a cab and get into it; you must then tell the cabbie to go to Bishop's Road — hoorah you've dodged Lestrade.

Return to Leatherhead and wait unttil 12 am, go to Basil's bedroom and you'll find him asleep. Type TAKE BASIL, go to the library and open the safe then put Basil in the safe. Go to Daphne's room (in Brown's house), take her and carry her back to the safe. If you want to have even more fun put the bodies in the safe as well. *(Is that for safe-keeping? Ed)* Bit of a joker is our Paul!

Finally **John Wilson** is back again with yet another *War and Peace* of hints and tips — you'd think he'd have run out of printer paper by now. He complains that he's never going to be 'El Supremo' if we don't print all the hints and tips he provides. What d'you want John, a whole issue of *YS* dedicated to hints 'n' tips?

Right John, here are a few of your supremo tips just to keep you happy. First *Warlord.* In order to get your mitts on the bronze helmet release the hare from the trap, go to the cavern on the beach and 'CLIMB INTO POOL', go East then North, 'CLIMB OUT OF POOL' and then retrace your steps. Once you've got the helmet you can cross the causeway. You can then get the sword by going North, East and North to the lake and SLEEP. You'll need this to kill the bear.

Finally John reckons the Pig, Clay Pot, Silver Skull and Vase are red herrings — does anybody out there know better? If so write in and tell us.

He's also got a few tips for *Gremlins* — surprise, surprise! To avoid the darts, GO DOWN. To kill the Gremlin, take the Sword and go to the lounge — sounds like *Cluedo.* Well that's all we've room for this month — sorry John. But don't worry we'll be putting even more of you're hints 'n' tips in next month.

If you're still wandering about like a lost soul, have a shifty at the masters below and if that's no help write in and we'll publish your problems. You'll even gain instant fame. On the other hand if you think you know all the answers, write in and let us all in on the secret. You may even oust John Wilson from the position of 'El Supremo', though it'll take some doing.

All you've got to do is write to Give Us A Clue, *YS* 14 Rathbone Place, London W1P 1DE. You too can become 'El Supremo' of the Adventure page.

## KINGS OF THE CASTLE

*The Hobbit, Urban Upstart* and *Dallas Quest*
Neil McCabe, 2 Stafford Road, Eccles, Manchester M30 9HW.

*Erik The Viking*
Lorraine Weir, 42 Elie Avenue, Deans, Livingston, West Lothian, Scotland EH54 8ET.

*The Hobbit, Twin Kingdom Valley, Lords Of Midnight, Shadowfire, Urban Upstart, Mountains Of Ket, Doomdarks Revenge* and *Eureka.* James Elliot, 266 Carseview, Tullibody, Alloa FK10 2SU.

*Sherlock*
Paul McPherson, 8 Foruie Path, Bridge Of Don, Aberdeen AB2 8TG.

*Eureka*
Dan Johansson, Solbrinken 25, S 28100 Haussleholm, Sweden.

*Warlord, Spiderman, Gremlins, Twin Kingdom Valley* and many many more!
John 'El Supremo' Wilson, 26 Spotland Tops, Cutgate, Rochdale, Lancashire 0L12 7NX.

## DOWN IN THE DUNGEON

*The Hulk* — 'How do I lift the iron ring in the floor, and what's the use of the fan and the mirror?' Eduardo Neves, R Jose Maria Niclau, 22, 2070 Cartaxo, Portugal.

*Valkyrie 17* — 'How do I go to the town; where is the key?' Robert Ridell, Ormvraksgatan 11, 21462 Malmoe, Sweden.

*The Fourth Protocol* — 'Any help gratefully received.' David Neeson, 25 Ladywell Drive, Tullbody, Clackmannanshire, Scotland.

*Fantasy Diamond* — 'How do I open the musical door and the wooden chest?' Andrew Sumpner, 248 Ramilllies Park, Aldershot, Hants GU11 2EQ.

*Hampstead* — 'How do I meet the man on the train?' Toby Blake, 25 Holm Park, Inverness, Scotland IV2 4XT.

*Sherlock* — 'How do I get into Basil Phipps' London house?' Neil McCabe, 2 Stafford Road, Eccles, Manchester M30 9HW.

*Quest For the Holy Grail* — 'How do I get past the rabbit without being torn limb from limb?' Tony Wiltshire, 81 Whormely Road, Stevenage, Herts SG1 15S.

*Mountains Of Ket* — 'Where is the hat needed to enter the skull?' A Saleh, 60 Washington Drive, Windsor, Berks SL4 4UR.

*Spiderman* — 'How do I kill Electro?' J Mullan, 77 London Lane, Bromley, Kent BR1 4HF.

the opinion that the graphics are pretty naff — if I were Adrian I'd feel positively embarrassed. Adrian seems to lead a very eventful life for a boy of 13¾.

**Oct 18th 1985:** Adrian is now trying to teach his dog a few tricks and I can choose what he should do. I don't know why he bothers as the Ed always says you can't teach an old dog new tricks. I think I'm getting a complex about being fat!

**Oct 19th 1985:** I keep choosing the wrong options so I've made Adrian only a namby pamby schoolboy. This is making me lose confidence in my gamesplaying ability.

**Oct 20th 1985:** I didn't play the game today because of my complex over being fat!

**Oct 21st 1985:** I've just noticed (people tell me I'm very observant for a girl my age) Mosaic has put the CBM 64 instructions on the tape inlay card and covered it up with a Spectrum sticker. I think I'll write a stiff letter to Mosaic about this cheapskate behaviour.

**Oct 22nd 1985:** I've come to the conclusion that Mole is a game for 13¾ year olds and not 23 year olds. All you have to do is read snippets from his diary and make Adrian dead popular with everyone, especially that nymphomaniac Pandora.

**Oct 23rd 1985:** I finished the game today and Adrian is only a surburban schoolboy. I think this game will be dead popular but it's only a namby pamby computer game as far as I'm concerned.

## Terrormolinos

Melbourne House/£7.95



*Terrormolinos* isn't just the kind of place you only visit once it's also one of those games you'll never return to.

You've decided to visit Terrormolinos on the Costa Brava with Beryl, the wife, and Ken and Doreen, the kids. Sounds wonderful eh? Little do you know that Terrormolinos is a real dive and that you'll have to face such perils as being gored by a raging bull, getting heatstroke, suffering severe food poisoning and losing an argument with a Euro-juggernaut.

The aim of the game is not only to survive the worst package tour of your life but to bring back ten snapshots to prove you actually did it!

The trouble starts before you've even left your cosy semi in the murky depths of Slough. You've got about ten minutes to pack and get the kids out of the house. Sounds easy huh? Well it certainly ain't!

There are numerous catches designed to hinder your departure. But after a while they get to be a dead bore rather than an intellectual challenge. Not only do you have to search for your passport, tickets and suitcase, but you've also got to remember daft thinks like locking the step ladder before you climb it or you'll break your neck!

And if you attempt to board the taxi without dropping the ladder you'll get more than a mouthful from the indignant cabbie.

Having successfully packed and survived the journey to the hotel with Ken throwing up all over the place, the adventure really begins...

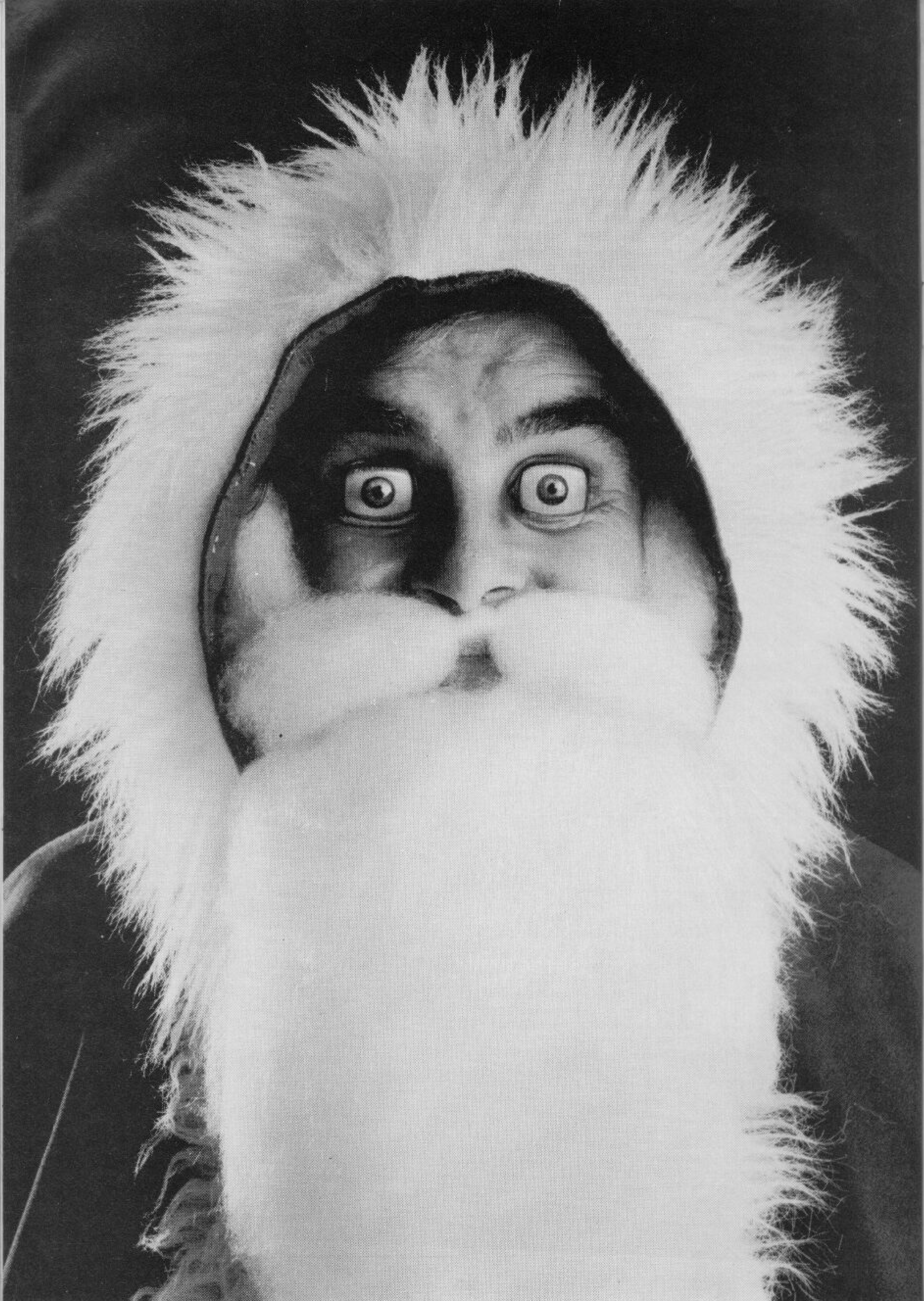
Once you reach the sun-soiled shores of Spain you're confronted with seven greasy-haired, tight-buttocked prima donnas who fancy themselves as waiters and a crazy Spanish coach driver offering every excursion under the sun. It's here you've got to be selective as there are only twelve exposures in your camera and you must take ten successful pics.

Everytime you suffer a fatal experience or take a decent piccy, a picture will magically develop on the screen. The graphics in *Terrormolinos* are supposed to reproduce those saucy seaside postcards. If you ask me, they've got a real cheek to try it!

I got a bit fed up with being arrested for flashing or for taking a really good pic of a wild nightclub and I got even more cheesed off with dying everytime I put a foot wrong.

*Terrormolinos* is original and quite fast but its predecessor, *Hampstead*, is much the better game!

Wish you were here playing Terrormolinos... instead of me.



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It all began with the ZX80 ...the first personal computer retailing for under £100. Next, Sinclair Research announced the ZX81, offering memory expansion to 16K. Completing the ZX series of micros came the Spectrum and its big brother, the Spectrum+.

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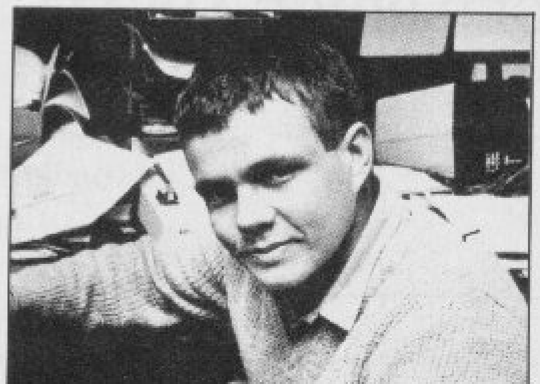
Incorporating many of the best features of Basics found on some of the Spectrum's major rivals (such as the BBC Micro, CBM 64 and Amstrad computers), *YS MegaBasic* gives you the opportunity to unleash power normally associated with machine code!

The program itself uses 19K of RAM, leaving you with 22K to write your own *YS MegaBasic* programs. It may seem as though you've lost a lot of memory, but you'll find you don't need so much code to create on-screen effects with *YS MegaBasic*. Anyway, when was the last time you wrote a program larger than 22K?

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*YS MegaBasic* incorporates a *real* single-letter keyword entry system. And before you start thinking this is going to mean more typing, *YS MegaBasic* allows most commands to be abbreviated. For example, you'd type 'RA.' instead of 'RANDOMISE'.



**The man behind *YS MegaBasic* — Mike Leaman.**

## KEY FEATURES OF YS MEGABASIC

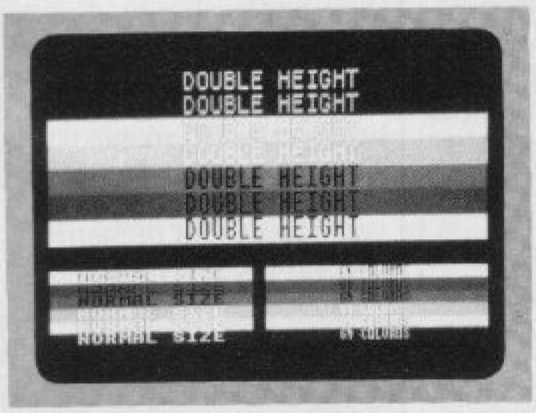
- *An extended command set. YS MegaBasic recognises over 35 new commands, which allow you to access the new features available as well as providing the opportunity to make more of the commands in standard ZX Basic.*
- *64 columns of text. Useful for wordprocessing and database applications.*
- *Three character sizes. Using **YS MegaBasic**, you've now the choice of accessing double-height, standard and half-width characters.*
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- *Windows. You can manage up to six QL-style windows on-screen at any one time.*
- *Sprites. Using the free **Sprite Designer** package that accompanies each copy of **YS MegaBasic**, you'll be able to design and manipulate up to ten sprites on-screen at once!*
- *Enhanced sound. Mike Leaman's taken the Spectrum's BEEP command and given it the full Mega-treatment.*
- *Procedures. Structure your programs and define new commands — it's all here!*
- *Stippled characters. QL-style stipples allow you to mix colours on-screen to give interesting colour effects.*

# ZX BASIC?

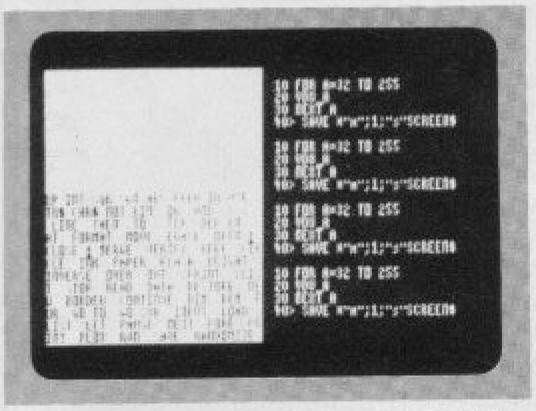
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Included in the *YS MegaBasic* package, you'll find a special utility program called *Sprite Designer*. Written by Mike Leaman in *YS MegaBasic*, this 11K program is designed to help you create sprites on the Spectrum.

You can have up to ten sprites on-screen at any one time, but if you're careful with memory you can get more!




**Here, YS *MegaBasic* is showing off its multifarious character sizes and fonts. Each window contains text in three different sizes: double height, normal height and that used for 64-columns; double height and standard text can be output in three different fonts.**



**The screen format for the input/output of YS *MegaBasic*. Three windows are provided for input, LISTing and RUNning programs; under software control, each window's size and purpose can be changed to suit individual requirements.**

## YS MegaBasic

***Available only by mail order and only from***

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**Your Spectrum, YS MegaBasic** Offer, Sportscene Specialist Press, 14 Rathbone Place, London W1P 1DE.

# YS MEGABASIC PRIORITY ORDER FORM

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Just complete the order form below (or a photocopy) and send it off to *Your Spectrum, YS MegaBasic Offer, Sportscene Specialist Press, 14 Rathbone Place, London W1P 1DE.* For each copy you'll need to enclose a cheque/Postal Order for £9.95 made payable to Sportscene Specialist Press. We won't give up until a new name makes it to the birthday honours list — arise Sir Michael Leaman!

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# Beyond Midnight

**Sorderon's Shadow *is a major new epic, complete with a cast of thousands and glorious landscaped sets.* Peter Freebrey *becomes the un-named one and prepares for adventure...***

Beyond's latest saga is not a game to be trifled with. Over 4,000 locations and a claimed 30,000 graphics screens — remind you of anything? That's right — it uses the landscaping techniques pioneered by Mike Singleton in *Lords of Midnight*. Only this time, it's also a full blooded adventure which understands complex text commands and has all manner of people and creatures in it — both good and bad — all doing their




*Balord Aravor can be summoned in the church of Balomir. He'll outline your quest. Keep in with Aravor — he'll be a great help later.*

own thing. And of course, there's a hefty storyline for you to digest before you stand a chance of playing the game.

Sorderon, not content with being an evil wizard, has discovered the secret of immortality, slain the rightful king of Elindor and now rules the land with fear and




*Samus the winged horse desires Krok leaves, which can be found to the north. Pay him well and he'll lead you to the woodcutter's tool.*

torment. All those faithful to the king have been slain or transformed. All who are known to him risk his terrible vengeance — fear stalks the day and death follows by night *(Calm down! Ed)*. Under his rule, Elindor is dying.

But there's hope. One of the Lords of Elindor has for years been calling across the cosmos for an 'unknown warrior' who'll rid the land of Sorderon's evil shadow. All pretty standard stuff and nothing to thrill you to death. Until you discover that the unknown warrior is *you*! Your job is to single-handedly rid Elindor of its tyrant. To do this, you must complete, in order, nine separate tasks which lead to his downfall. This might seem a bit steep but it does at least give you some chance of succeeding in an otherwise strange and deadly land.

The 14-page manual is a great help and will be essential to complete the game — as is a speech in the early stages that was omitted from our review copy! The manual sets out the tasks and describes the major characters and objects. There's also a complete map of Elindor which is crucial even though some of the windmills and igloos have been replaced by huts. P'raps the climate changed or maybe the programmers ran out of memory...

Keep a close watch on where you are and what's in front of you or you may well find yourself dead! Bogs and marshes are no place for the newcomer. You'll also come across many different creatures on your travels, mostly hostile. Pay careful attention to that part of the instructions dealing with 'the nine tasks of the un-named one', 'characters' and 'objects'. You'd be wise to remember the names of the goodies and baddies 'cos if you kill the wrong one... you're done for!

Talking about 'the nine tasks'— these lead you through the adventure and without them you won't stand a snowball's chance in hell. As the hero you must complete these nine tasks, seven in the correct order and the other two at any time.

Cryptic verse and character speech will appear throughout play. These clues should aid you in your quest and the instruction booklet will provide you with further information when you're really stuck!

The range of gruesome creatures in *Sorderon's Shadow* is truly amazing and




*The wicked witch of the west, Larras, is an evil old hag but she'll swop something you need for something she needs. It's a case of you scratch my back and I'll scratch yours.*

their graphical representation brilliant. You'll meet anything from a manic treeblower (eh?) to a healer called Morkoth. These two characters are actually quite useful but you'll meet a lot of nasties too, such as the Thornman,




*Tracker holds a very special stone, the Orb of Caradach, which reveals the means to overthrow the evil wizard Sorderon.*

Sandman, Krillan and the Dunecrawlers.

Elindor is a large land and it'll take quite a bit of time to trek across from one side to another. If some evil doer puts the boot in and you die you'll have to repeat that journey again — unless of course you've saved your position onto tape.

Should you meet with death the computer appears to 'hang' and none of the keys work. It's actually waiting for you to load in a saved position, though it

doesn't actually tell you this in the instructions. You did save as you travelled didn't you?

Don't be too surprised when some of the creatures you meet don't want to go

*MANIC TREEBLOWER*



*Caradach's friend Manic holds something you want. You must return this object to it's rightful owner in order to receive the first part of Sorderon's bane.*

away — this happens a lot and not only does it slow the game but if you can't satisfy their wishes you may find they decide to dispense with your services. Nasty eh? It's a good idea to move through the night though you must watch your strength as well as where you walk — you may not see that marsh up ahead...

*MORKOTH*

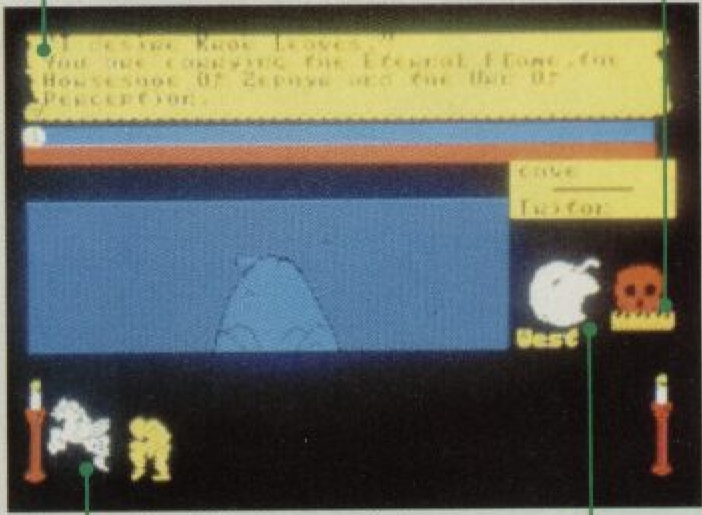


*You'll have to seek Hydral, prince of Bagul, to gain an object desired by Morkoth the healer. Give this to him and he'll help you speak to Kerral.*

*Sorderon's Shadow* is one complex adventure, so if you like 'em big — get out your trusty sword, don your hiking boots and don't forget to leave a note for the milkman...

**The text window shows what's going on and what you're carrying — in this case the Eternal Flame, Horseshoe of Zephyr and the Urn of Perception — in usual adventure style.**

**Watch the numbskull ... it's a clock! When it rises completely out of the flames, it's midnight and the Krillan hordes take to the street looking for action. Best to REST until daybreak.**

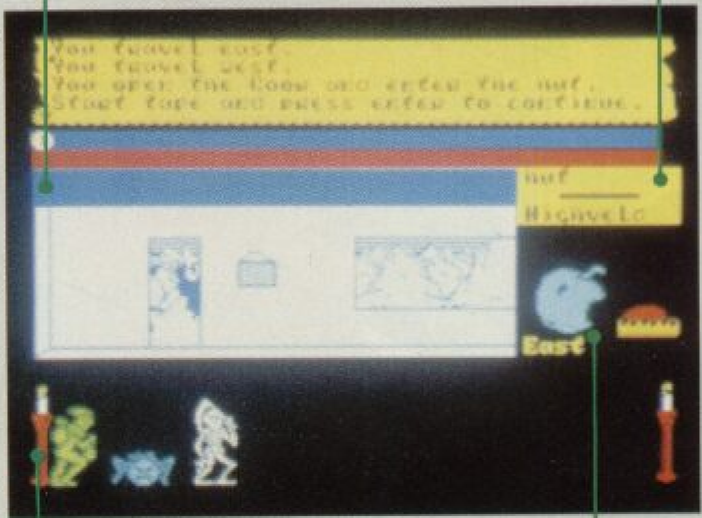



**Samus, the winged horse, has a definite craving for Krok leaves and you're well advised to find him some. Keep Samus happy and he'll show you the woodcutter's tool!**

**Core! This half-eaten apple shows your remaining strength. If it's white, you're on top of the world. Green means you're feeling a bit weedy and if it turns blue, you'd better watch it!**

**Innit pretty? The landscaping window shows you where you are — here, you're inside Tracker's hut. The window updates itself regularly and is capable of 30000 different views!**

**This window names the type of landscape you're in together with the region you're in. So here you are in a hut (wow, I'd never have spotted that) in the Highveld region.**

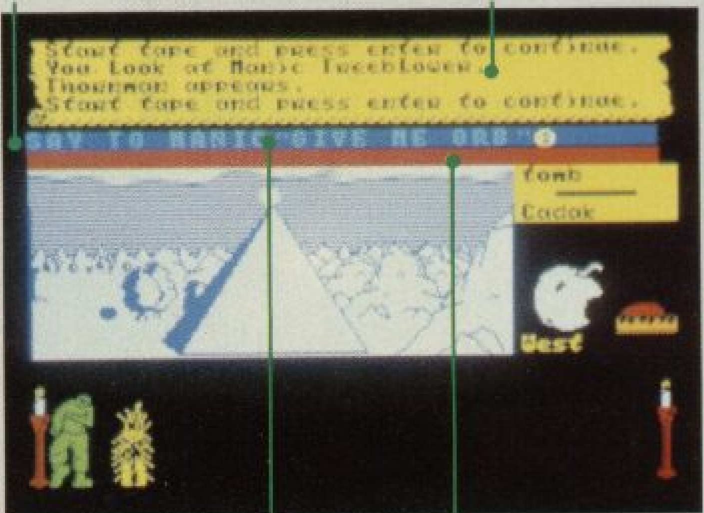



**These three are Tracker, Retriever and the Skeleton. The Tracker comes in very useful in the fifth task as he knows the whereabouts of the Orb of Caradach, a stone gifted with the knowledge of how to overthrow Sorderon.**

**Oh dear — the apple's gone a moudly blue colour! You're pretty low on strength — if you don't watch it, you'll be attacked by a Dunecrawler and you won't be able to fight back.**

**You've got one line to enter your commands — they can be quite complex like this one and you've got a vocabulary of 750 words to go at! One neat trick is the ability to instantly recall any of your last three commands using a sentence store feature.**

**Enter Manic Treeblower (Manic who?) and the Thornman. Old prickly features has a prickly nature too so don't mess with him unless you're feeling strong!**




**You could always try asking! Sorry, but in Elindor you rarely get something for nothing and you're going to have to come up with a better deal than this.**

**Refusals appear here — so if you've bodged up a command or the program can't understand you, you can still see the command you tried . . .**



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**Potters Bar.** The Computer Shop, 197 High Street. Tel: 0707 44417.
**Stevenage.** DJ Computers, 11 Town Square. Tel: 0438 65501.
**Watford.** SRS Microsystems, 94 The Parade, High Street. Tel: 0923 26602.
**Welwyn Garden City.** DJ Computers. 40 Fretherne Road. Tel: 96 28444

**HUMBERSIDE**
**Beverley.** Computing World, 10 Swabys Yard, Dyer Lane. Tel: 0482 881831.
**Grimsby.** R.C. Johnson Ltd, 22 Friargate, River Head Centre, Tel: 0472 42031.
**Hull.** Boots, 48-58 Prospect Centre. Tel: 0482 22334.
**Hull.** Computer Centre, 26 Analby Road. Tel: 0482 26297.

**ISLE OF MAN**
**Douglas.** T.H. Colebourn, 57-61 Victoria Street. Tel: 0624 73482.

**KENT**
**Ashford.** DGH, 10 North Street. Tel: 0233 32597.
**Beckenham.** Supa Computers, 425 Croydon Road. Tel: 01-650 3569.
**Bromley.** Boots, 148-154 High Street. Tel: 01-460 6688.
**Chatham.** Boots, 30-34 Wilmott Square, Pentagon Centre. Tel: 0634 405471.
**Gravesend.** Gravesend Home Computers, 39 The Terrace. Tel: 0474 23871
**Folkstone.** Boots, 24-26 Sandgate Road. Tel: 0303 54007
**Maidstone.** Boots, 56-62 King Street. Tel: 0622 53912.
**Maidstone.** Kent Micros, 52 Union Street. Tel: 0622 52784.
**Rainham.** Microway Computers, 39 High Street. Tel: 0634 376702.
**Sevenoaks.** Ernest Fielder Computers, Dorset Street. Tel: 0732 456800.
**Shortlands.** The Village House of Computers, 87 Beckenham Lane. Tel: 01-460 7122.
**Sittingbourne.** Computer Plus, 65 High Street. Tel: 0795 25677.
**Tunbridge Wells.** Boots, 7-11 Calverley Road. Tel: 0892 26486.
**Tunbridge Wells.** Modata Computer Centre, 28-30 St. Johns Road. Tel: 0892 41555.

**LANCASHIRE**
**Blackpool.** Boots, 28-38 Bank Hey St & Victoria St. Tel: 0253 22276.
**Blackpool.** Blackpool Computer Store, 179 Church Street. Tel: 0253 20239.
**Bolton.** Computer World UK. 208 Chorley Old Road. Tel: 0204 494304
**Burnley.** IMO Computer Centre, 39-43 Standish Street. Tel: 0282 54299.
**Lancaster.** Northern Lights, 89 Scotforth Road. Tel: 0524 62634.
**Preston.** 4Mat Computing, 67 Friargate. tel: 0772 561952.
**Rochdale.** Boots, 50 Market Way. Tel: 0706 53225.

**LEICESTERSHIRE**
**Leicester.** Boots, 30-36 Gallowtree Gate. Tel: 0533 21641.
**Leicester.** DA Computers 104 London Road. Tel: 0533 549407.
**Market Harborough.** Harborough Home Computers. 7 Church Street. Tel: 0858 63056.

**LONDON**
**W1.** Computers of Wigmore Street, 104 Wigmore Street. Tel: 01486 0373.
**W1.** Galaxy. 230 Tottenham Court Road. Tel: 01-636 6500.
**W1.** Sonic Foto Micro Center, 256 Tottenham Court Road, Tel: 01-580 5826.
**W1.** Tomorrows World Today, 27 Oxford Street. Tel: 01-439 7799.
**WC1.** Transam Micro Systems, 59-61 Theobalds Road. Tel: 01-405 5240.
**W8.** Boots, 127a Kensington High Street. Tel: 01-937 6882.
**SE7.** Vic Oddens Micros, 6 London Bridge Walk. Tel: 01-403 1988.
**SE15.** Castlehurst Ltd, 152 Rye Lane, Peckham. Tel: 01-639 2205.
**EC2.** Devron Computer Centre, 155 Moorgate. Tel: 01-638 3339.
**N14.** Logic Sales, 19 The Bourne, The Broadway, Southgate, Tel: 01-882 4942.
**N22.** Boots, 38-40 High Road, Wood Green. Tel: 01-881 0101.
**NW4.** Davinci Computer Store, 112 Brent Street, Hendon. Tel: 01-202 2272.
**NW4.** Boots, Brent Cross Shopping Centre. Tel: 01-202 5256/7.
**NW11.** Computers Inc, 86 Golders Green. Tel: 01- 209 0401.

**GREATER MANCHESTER**
**Altrincham.** Boots, 13-17 George Sreet. Tel: 061-928 4471
**Hyde.** C Tech Computers, 184 Market Street. Tel: 061-366 8223
**Manchester.** Boots, 32 Market Street. Tel: 061-832 6533.
**Manchester.** Mighty Micro, Sherwood Centre, 268 Wilmslow Road, Fallowfield. Tel: 061-224 8117.
**Manchester.** NSC Computer Shops, 29 Hanging Ditch. Tel: 061-832 2269.
**Marple.** Marple Computer Centre, 106 Church Lane. Tel: 061-449 9933.
**Oldham.** Home & Business Computers, 54 Yorkshire Street. Tel: 061-633 1608.
**Oldham.** Boots, 1 Town Square Shopping Centre. Tel: 061-624 2525
**Stockport.** National Micro Centres, 36 St Peters Gate. Tel: 061-429 8080

**MERSEYSIDE**
**Liverpool.** Hargreaves, 31-37 Warbreck Moor, Walton. Tel: 051-525 1782.
**St Helens.** Microman Computers, Rainford Industrial Estate, Mill Lane, Rainford. Tel: 0744 885242.
**Southport.** Boots, 31-39 Chapel Street. Tel: 0704 33907.
**St. Helens.** Boots, 8 Church Street, 24 La Grange Arcade. Tel: 0744 25488.

**MIDDLESEX**
**Harrow.** Camera Arts, 42 St. Anns Road, Tel: 01-427 5469.
**Hounslow.** Boots, 193-199 High Street. Tel: 01-570 0156.
**Southall.** Twillstar Computers Ltd, 7 Regina Road. Tel: 01-574 5271.
**Teddington.** Andrews, Broad Street. Tel: 01-977 4716.
**Twickenham.** Productive Computers Ltd, 72 Heath Road. Tel: 01-891 4991.
**Uxbridge.** JKL Computers, 7 Windsor Street. Tel: 0895 51815.

**NORFOLK**
**Norwich.** Adams, 125-129 King Street. Tel: 0603 22129.
**Thetford.** Thetford CB & Micros, 21 Guildhall Street. Tel: 0842 61645.

**NOTTINGHAMSHIRE**
**Mansfield.** Boots, 39 Four Seasons Shopping Centre, Tel: 0623 23089.
**Nottingham.** Boots, 11-19 Victoria Centre. Tel: 0602 470676.
**Nottingham.** Telstar, 280 Huntingdon Street. Tel: 0602 505585.
**Worksop.** Computer Graphix, 32 Bridge Street. Tel: 0909 472248.

**NORTHAMPTONSHIRE**
**Kettering.** Boots, 35 Gold Street. Tel: 0536 514675.
**Northampton.** Boots, 9 The Parade. Tel: 0604 22573

**NORTHUMBERLAND**
**Morpeth.** Telerents (Northern) Ltd, 31 New Gate Street. Tel: 0607 513537.

**OXFORDSHIRE**
**Abingdon.** Ivor Fields Computers, 21 Stert Street, Tel: 0235 21207.
**Banbury.** Computer Plus, 2 Church lane. Tel: 0295 55890.
**Oxford.** Science Studio, 7 Little, Clarendon Street. Tel: 0865 54022.
**Oxford.** Absolute Sound and Video, 19 Old High Street, Headington, Tel: 0865 65661.

**SCOTLAND**
**Aberdeen.** Boots, 133-141 Union Street. Tel: 0224 585349.
**Dundee.** Boots, 49-53 High Street, Tel: 0382 21756.
**Edinburgh.** Boots, 101-103 Princes Street. Tel: 031-225 8331.
**Edinburgh.** Microworld Computer Group. 12 Leven Street. Tel: 031 228 1111
**Edinburgh.** Edinburgh Computers, 51-57 Lothian Road. Tel: 031 229 4418.
**Edinburgh.** Silicon Centre, 7 Antigua Street. Tel: 031 557 4546.
**Glasgow.** Boots, 200 Sauchiehall Street. Tel: 041 332 1925.
**Glasgow.** Microworld Computer Group, 11 Bath Street. Tel: 041 332 1116.
**Glasgow.** Boots, Union Street and Argyle Street. Tel: 041 248 7387.
**Glasgow.** Tom Dixon Cameras, 15-17 Queen Street. Tel: 041-204 0826.
**Glasgow.** Commscot Ltd, 30 Gordon Street. Tel: 041 226 4878.
**East Kilbride.** Boots, 33-37 The Plaza. Tel: 035 52 20629.
**Falkirk.** Boots, 79-91 High Street. Tel: 0324 20535.
**Hamilton.** Tom Dixon Cameras, 8 Cadzou Street. Tel: 0698 283193.
**Peterhead.** North East Computers. 1 Ellis Street. Tel: 0779 79900.

**SHROPSHIRE**
**Shrewsbury.** Computerama, 13 Castlegate. Tel: 0743 60528.
**Telford.** Computer Village, 2/3 Hazeldine House, Central Square. Tel: 0952 506771.
**Telford.** Telford Electronics, 38 Mall 4. Tel: 0952 504911.

**SOMERSET**
**Taunton.** Boots, 64-65 High Street. Tel: 0823 76061.

**STAFFORDSHIRE**
**Newcastle-under-Lyme.** Computer Cabin, 24 The Parade, Silverdale. Tel: 0782 636911.
**Stoke on Trent.** Town Computer Store, 30 Town Road, Hanley. Tel: 0782 287540.
**Stoke on Trent.** Boots, 3-5 Market Square, Hanley. Tel: 0782 23271.

**SUFFOLK**
**Bury St. Edmunds.** Boots, 11-13 Cornhill. Tel: 0284 701516.
**Bury St. Edmunds.** The Suffolk Computer Centre, 1-3 Garland Street. Tel: 0284 705503.
**Ipswich.** Computer Magic, 24 Crown Street. Tel: 0473 50965.

**SURREY**
**South Croydon.** Concise Computer Consultants. 1 Carlton Road. Tel: 01-681 6842.
**Croydon.** The Vision Store, 53-59 High Street. Tel: 01-686 6362.
**Croydon.** Boots, The Mall, 12-18 Whitgift Centre. Tel: 01-688 6021.
**Epsom.** The Micro Workshop, 12 Station Approach. Tel: 0372 721533.
**Guildford.** Guildford Computer Centre, 5 The Quadrant, Bridge Street. Tel: 0483 578848.
**Wallington.** Surrey Micro Systems, 53 Woodcote Road. Tel: 01-647 5636.
**Woking.** Harpers, 71-73 Commercial Way. Tel: 0486 225657.

**SUSSEX**
**Brighton.** Boots, 129 North Street. Tel: 0273 27088.
**Brighton.** Gamer, 71 East Street. Tel: 0273 728681.
**Bognor Regis.** Bits & Bytes, High Street. Tel: 0243 867143.
**Eastbourne.** Boots, 15 Eastbourne Arndale Centre. Tel: 0323 27742.
**Horsham.** Boots, 1 Swan Walk, Tel: 0403 53053.
**Horsham.** Orchard Computer Centre, 34 East Street. Tel: 0403 64884.
**Worthing.** Boots, 48-52 Montague Street. Tel: 0903 207106.

**TYNE & WEAR**
**Newcastle-upon-Tyne.** Boots, Eldon Square. Tel: 0632 329844.
**Newcastle-upon-Tyne.** RE Computing, Parkview House, Front Street, 4 Lane Ends. Tel: 091 2701740.
**Sunderland.** Business Micro Communications Ltd, Refuge Assurance Buildings, Saint Thomas Street, West Sunniside. Tel: 0783 654916.

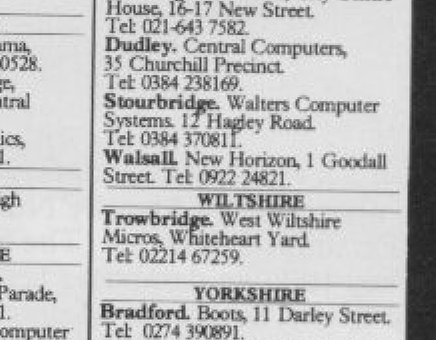
**WALES**
**Aberdare.** Inkey Computer Services, 70 Mill Street, The Square, Trecynon. Tel: 0685 881828.
**Aberystwyth.** Aberdata at Galloways, 23 Pier Street. Tel: 0970 615522.
**Cardiff.** Boots, 36 Queens Street & 105 Frederick Street. Tel: 0222 31291.
**Cardiff.** The Computer Shop, 41 The Hayes. Tel: 0222 26666.
**Cardiff.** Cardiff Microcomputers, 46 Charles Street. Tel: 0222 373072.
**Newport.** Gwent Computers, 92 Chepstow Road. Tel: 0633 841760.
**Newport.** Boots, 155-156 Commercial Street. Tel: 0633 51212.
**Swansea.** Boots, 17 St. Marys Arcade, The Quadrant Shopping Centre. Tel: 0792 43461.
**Swansea.** The Micro Store, 35-36 Singleton Street. Tel: 0792 46980.

**WARWICKSHIRE**
**Coventry.** Boots, 38-42 Corporation Street. Tel: 0203 26561.
**Leamington Spa.** Boots, 31 Parade. Tel: 0926 24945.
**Leamington Spa.** Leamington Hobby Centre 121 Regent Street. Tel: 0926 29211.
**Nuneaton.** Micro City, 1a Queens Road. Tel: 0203 382049.
**Rugby.** O.E.M., 9-11 Regent Street. Tel: 0788 70522.

**WEST MIDLANDS**
**Birmingham.** Boots, City Centre House, 16-17 New Street. Tel: 021-643 7582.
**Dudley.** Central Computers, 35 Churchill Precinct. Tel: 0384 238169.
**Stourbridge.** Walters Computer Systems. 12 Hagley Road. Tel: 0384 370811.
**Walsall.** New Horizon, 1 Goodall Street. Tel: 0922 24821.

**WILTSHIRE**
**Trowbridge.** West Wiltshire Micros, Whiteheart Yard. Tel: 02214 67259.

**YORKSHIRE**
**Bradford.** Boots, 11 Darley Street. Tel: 0274 390891.
**Doncaster.** Boots, 13-15 French Gate, Tel: 0302 62238.
**Barnsley.** Boots, 34-40 Cheapside. Tel: 0226 82616.
**Huddersfield.** Micro World Computers, 1006-1010 Manchester Road, Linthwaite. Tel: 0484 846117.
**Huddersfield.** Boots, 22 King Street. Tel: 0484 21756.
**Leeds.** Boots, 19 Albion Arcade, Bond Street Centre. Tel: 0532 33551.
**Leeds.** Micro Power, Northwood House, North Street. Tel: 0532 458800.
**Sheffield.** PIP Micro Communications, 9 Taptown Crescent, Broomhill. Tel: 0742 661096.
**Sheffield.** Boots, 4-6 High Street. Tel: 0742 78333.
**Wakefield.** Boots, 26-28 Upper Kirkgate. Tel: 0924 376181.
**York.** York Computer Centre, 7 Stonegate Arcade. Tel: 0904 641862.




**Phone 01-278 3143 for your free information pack now !**
**Micronet 800, 8 Herbal Hill, London EC1.**

It's 2010 and you're in the thick of it. Your only chance of survival is to collect valuable pellets which are essential for the propagation of the human race.

No it's not *Blade Runner* but *The Grid* — the fourth entry to *YS* fame frame, Opportunity Knocks. **Conor O'Neill** from Kilkenny in the Republic of Ireland has toiled for hours to perfect this program. It's easily one of the finalists but whether or not it reaches the number one spot is up to you...

A combination of Basic and machine code provides the formula for this compulsive action-packed game, based on a simple but ingenious idea.

You are thrown into the battlefield from the word go and don't you know it! Reaping your harvest is easy — you'll only need to occupy the same grid location as a pellet in order to collect it. But avoiding the trackers isn't quite so easy — ah trackers, did we forget to mention them?

Scanning the harvest area and shooting laser blasts at will (*Who he? Ed*) the trackers show no mercy where human scavangers are concerned. If you don't fancy an early grave keep well out of their firing line.

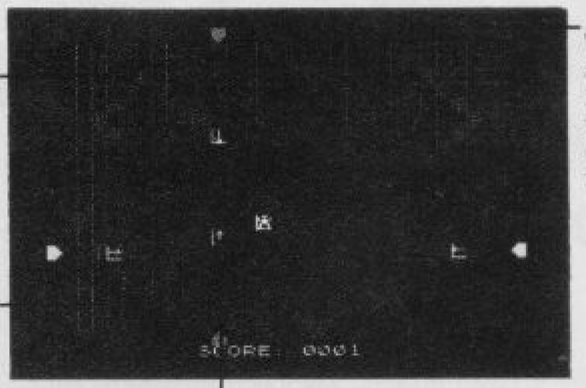
Control is simple. Put your fingers on the Q, A, O and P keys and prepare to face *The Grid*...

# OPPORTUNITY KNOCKS

***Blast off to the 21st century with Conor O'Neill's entry in the Opportunity Knocks fame trail. Can you beat it? Can you save the human race at all? You're gonna have to face ...***

# THE GRID

Your aim is to collect all the pellets. Harvest the lot on one screen and you'll get a new pattern on the next . . .




Watch for the trackers at the sides of the grid . . . they're not stupid you know and will fire only when you're in their sight!

You start down here but don't hang around as it's a very dangerous place. Stick to the middle of the grid and you'll give yourself more time to dodge the missiles.

Missiles are easy to dodge on the slower levels (six and above) but once you're down to level 1 to 3, you've got no chance of evasion manoeuvre at all . . .

This program is available on Digi'T'ape

## Knocking Order

Conor's entry into Opportunity Knocks now only leaves two places for your megagame — do you dare risk leaving it to the last moment?

If you want to have a go, remember that the program must be under 5K and make sure you include complete instructions with your tape. Last but not least, be certain that your entry is going to knock spots off its competitors.

The outright winner, chosen by you the readers, will have his or her program taken to a software house for possible commercialisation. And that's not all — they'll also receive a hefty fee from *YS* as will the rest of the finalists.

## So You Think You've Got it?

If you think you've got what it takes to be a megagame programmer don't waste a second, get your entry in fast. Send it to Gavin Monk, *YS*, Opportunity Knocks, 14 Rathbone Place, London W1P 1DE.

**DON'T READ THIS . . .**

**. . . unless you want a hand in playing this game. POKE 48211,0 will give you infinite lives, POKE 47961,x will let you view screen x, and greater control over speed can be gained by POKEing 50097 with the required value. Good Grid-dance!**

## The Basic Loader

**This program should be saved at the start of your master tape with SAVE "THE GRID" LINE 1. It's purpose is simply to load in the code and print high scores and so on.**

```
  1 LOAD ""CODE
  4 PAPER 0: INK 5: BORDER 0: CLS
  5 LET hsc=0
 10 PRINT AT 4,8;"CONTROLS : Q=UP "
 11 PRINT AT 5,19;"A=DOWN"
 12 PRINT AT 6,19;"O=LEFT"
 13 PRINT AT 7,19;"P=RIGHT"
 14 PRINT AT 9,3;"SELECT SPEED 1-8
(1 is fast)"
 15 LET a$=INKEY$
 16 IF a$="" THEN GO TO 15
 17 IF (CODE a$)>48 AND (CODE a$)
<57 THEN POKE 50097,((VAL a$)*32-1):
GO TO 19
 18 GO TO 15
 19 FOR f=1 TO 300: NEXT f
 20 POKE 47961,1
 21 RANDOMIZE USR 50192
 22 CLS
 23 LET sc=PEEK 45589+256*PEEK
45590
 24 IF sc>=hsc THEN LET hsc=sc
 25 POKE 45589,0: POKE 45590,0
 26 PRINT AT 4,4;"SCORE= ";sc;"
HISCORE= ";hsc
 27 PAUSE 0
 28 GO TO 14
```

## The Hex Loader.

**Standard stuff this. Just enter it and type RUN. You'll be asked to enter the Hex code as listed on this page, once done, save the code after your Basic loader.**

```
  1 REM General Hex Loader
  2 POKE 23658,8
  3 INPUT "Start Address ";start
  4 POKE USR "a",INT (start/256):
POKE USR "a"+1,start-256*INT
(start/256)
  5 CLEAR start-1
  6 LET start=256*PEEK USR "a"
+PEEK (USR "a"+1)
  7 INPUT "Length ";length
  8 INPUT "File Name ";f$
 10 FOR i=start TO start+length
STEP 8
 20 LET cs=0
 30 PRINT AT 0,0;"Address ";i
 40 INPUT "Hex 8 Bytes", LINE a$
 60 IF LEN a$<>16 THEN GO TO 1000
 80 LET f=0: FOR j=1 TO 16
 90 IF (a$(j)<"0" OR a$(j)>"9")
AND (a$ (j)<"A" OR a$(j)>"F") THEN
LET f=1
100 NEXT j
105 IF f=1 THEN GO TO 1000
110 FOR n=0 TO 7
120 LET y=CODE a$(1)-48: IF y>9
THEN LET y=y-7
130 LET z=CODE a$(2)-48: IF z>9
THEN LET z=z-7
140 LET va=16*y+z
150 LET cs=cs+va
160 POKE i+n,va
165 PRINT AT 2,n*3;a$( TO 2)
170 LET a$=a$(3 TO )
180 NEXT n
183 INPUT "Checksum "; LINE a$
184 PRINT AT 2,25;a$
185 IF VAL a$<>cs THEN GO TO 1000
187 CLS
190 NEXT i
200 CLS : PRINT "SAVE CODE AFTER
BASIC
LOADER."''"REMOVE EAR LEAD"
210 SAVE f$CODE start,length
220 CLS : PRINT "VERIFYING"
230 VERIFY ""CODE
240 CLS : PRINT "ALL OK": STOP
1000 PRINT AT 15,0;"ERROR": GO TO
20
```

## The Hex Data

**Enter this into the Hex loader eight bytes at a time. Its start address is 45056 and its length 5147.**

```
45056 3E 01 21 07 B2 77 CD A0 =765
45064 B0 11 01 08 2A 09 B2 CD =636
45072 2B B0 CD 32 B0 C9 3E B0 =1041
45080 2A 09 B2 77 11 00 01 2A =408
45088 09 B2 19 22 09 B2 21 05 =471
45096 B2 34 C9 A7 ED 52 22 0B =962
45104 B2 C9 2A 0B B2 22 09 B2 =831
45112 21 05 B2 36 00 C9 2A 0B =524
45120 B2 CD 4C B0 E5 23 36 05 =958
45128 E1 36 06 C9 7C E6 18 CB =1067
45136 2F CB 2F CB 2F C6 58 67 =936
45144 C9 3A 0B B2 E6 10 FE 10 =964
45152 1E 00 C2 67 B0 1E 10 3A =607
45160 0B B2 E6 0F 83 26 00 6F =714
45168 11 00 40 19 C9 CD 59 B0 =777
45176 11 02 40 ED 52 D4 96 B0 =940
45184 C9 7E FE BE C0 CD 3A C3 =1421
45192 00 21 17 B2 34 C9 2A 0B =540
45200 B2 2B CD 81 B0 C9 CD 8E =1279
45208 B0 CD 00 B0 CD 3E B0 C9 =1201
45216 CD 32 B0 06 08 11 0D B2 =653
45224 2A 05 B2 19 E5 2A 09 B2 =708
45232 3A 07 B2 FE 01 C2 BC B0 =1056
45240 2B C3 BD B0 23 D1 1A 77 =992
45248 CD 16 B0 10 E0 3E FF 2A =1002
45256 09 B2 11 00 01 ED 52 77 =643
45264 C9 CD 0E B1 CD DB B0 CD =1402
```

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```
45272 F1 B0 C9 3E 00 21 07 B2 =898
45280 77 CD A0 00 11 FF 07 2A =981
45288 09 B2 CD 2B B0 CD 32 B0 =1042
45296 C9 2A 0B B2 CD 4C B0 E5 =1118
45304 2B 3E 05 77 E1 36 06 C9 =715
45312 CD 59 B0 E5 D1 21 1D 40 =1034
45320 ED 52 D4 D1 B0 C9 2A 0B =1170
45328 B2 23 CD 81 B0 C9 CD 3E =1191
45336 B1 CD 75 B1 C9 CD B9 B1 =1444
45344 CD ED B1 C9 2A 0B B2 7C =1175
45352 11 20 00 FE 48 CA 36 B1 =808
45360 FE 50 CA 36 B1 C9 3E 1F =1061
45368 95 D8 11 20 07 C9 CD 24 =863
45376 B1 2A 0B B2 A7 ED 52 CD =1099
45384 81 B0 CD 32 B0 06 07 CD =954
45392 24 B1 2A 09 B2 A7 ED 52 =928
45400 11 0D B2 E5 2A 05 B2 19 =687
45408 7E E1 77 CD 16 B0 10 E7 =1120
45416 CD 24 B1 2A 0B B2 CD 2B =897
45424 B0 CD 32 B0 C9 2A 0B B2 =1039
45432 CD 4C B0 E5 11 20 00 19 =760
45440 36 05 E1 36 06 C9 2A 0B =598
45448 B2 11 3F 40 ED 52 D4 16 =875
45456 B1 C9 21 7F 50 ED 5B 0B =957
45464 B2 ED 52 D4 1D B1 C9 2A =1158
45472 0B B2 7C 11 20 00 FE 48 =688
45480 CA B1 B1 FE 40 CA B1 B1 =1430
45488 C9 7D D6 E0 D8 11 20 07 =103A
45496 C9 CD 9F B1 2A 0B B2 19 =998
45504 CD 81 B0 CD 32 B0 06 07 =954
45512 CD 9F B1 2A 09 B2 19 11 =812
45520 0D B2 E5 2A 05 B2 19 7E =796
45528 E1 77 CD 16 B0 10 E9 CD =1201
45536 9F B1 2A 0B B2 19 22 0B =637
45544 B2 CD 32 B0 C9 2A 0B B2 =1041
45552 CD 4C B0 E5 11 20 00 ED =972
45560 52 36 05 E1 36 06 C9 7B =750
45568 50 7D 50 6A B8 00 00 01 =574
45576 00 18 48 6A 50 9C C9 FF =894
45584 9C BE A2 E3 FF 11 00 00 =1007
45592 00 3E DF DB FE CB 47 00 =1032
45600 00 CA 00 B1 CB 4F CA 75 =980
45608 B0 3E FD DB FE CB 47 00 =1238
45616 00 CA 92 B1 3E FB DB FE =1311
45624 CB 47 00 00 CA B6 B1 C9 =988
45632 00 00 00 00 00 00 00 00 =0
45640 00 00 00 00 00 00 00 00 =0
45648 2A FF B1 22 01 B2 21 05 =725
45656 B2 36 00 C9 06 08 2A 03 =492
45664 B2 ED 5B 05 B2 19 E5 2A =985
45672 01 B2 3A 07 B2 FE 01 C2 =871
45680 76 B2 2B C3 77 B2 23 D1 =1075
45688 1A 77 2A 01 B2 36 00 11 =437
45696 00 01 2A 01 B2 19 22 01 =282
45704 B2 21 05 B2 34 10 CF C9 =870
45712 2A 01 B2 11 01 08 CD 9A =606
45720 B2 C9 A7 ED 52 22 FF B1 =1331
45728 C9 2A 01 B2 11 FF 07 CD =906
45736 9A B2 C9 2A FF B1 CD 4C =1288
45744 B0 36 04 C9 21 03 B2 11 =666
45752 6B B4 73 23 72 2A 63 B4 =872
45760 22 FF B1 CD CD B2 2A FF =1351
45768 B1 22 63 B4 C9 21 07 B2 =909
45776 36 00 CD 50 B2 CD 5C B2 =992
45784 CD A1 B2 CD 50 B2 CD AB =1383
45792 B2 C9 21 03 B2 11 73 B4 =905
45800 73 23 72 2A 65 B4 22 FF =876
45808 B1 CD CD B2 2A FF B1 22 =1273
45816 65 B4 C3 B4 B2 21 03 B2 =1048
45824 11 6B B4 73 23 72 2A 63 =709
45832 B4 22 FF B1 CD 16 B3 2A =1094
45840 FF B1 22 63 B4 C9 21 07 =986
45848 B2 36 01 CD 50 B2 CD 5C =993
45856 B2 CD 90 B2 CD 50 B2 CD =1373
45864 AB B2 C9 21 03 B2 11 73 =896
45872 B4 73 23 72 2A 65 B4 22 =801
45880 FF B1 CD 16 B3 2A FF B1 =1312
45888 22 65 B4 C3 FD B2 2A FF =1238
45896 B1 CD 4C B0 36 02 C9 CD =1096
45904 50 B2 06 08 CD BA B3 2A =836
45912 01 B2 19 ED 5B 03 B2 E5 =942
45920 2A 05 B2 19 7E E1 77 2A =762
45928 01 B2 36 00 11 00 01 2A =293
45936 01 B2 19 22 01 B2 21 05 =455
45944 B2 34 10 D8 CD BA B3 2A =1026
45952 FF B1 19 22 FF B1 CD 50 =1208
45960 B2 C9 2A FF B1 7C 11 20 =1026
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46152 03 B2 11 83 B4 73 23 72 =773
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46168 B3 CD 46 B3 2A FF B1 22 =1141
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46728 F5 CD 15 B4 2A 01 B2 A7 =1039
46736 ED 52 F1 77 ED 5B 05 B2 =1190
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46960 B7 21 50 B8 36 01 CD 50 =820
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47168 D2 B9 8A 50 4A 40 7B 50 =954
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47704 2A 63 B4 A7 ED 52 22 42 =907
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47808 B4 2B 22 46 BB 21 51 BB =812
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49720 A7 ED 52 22 4F BB C1 10 =995
49728 DD 11 03 00 2A 4F BB 19 =574
49736 22 4F BB C1 10 CD 21 02 =749
49744 50 22 4F BB 06 05 C5 06 =594
49752 1D C5 06 07 2A 4F BB 36 =601
49760 80 11 00 01 2A 4F BB 19 =479
49768 22 4F BB 10 EF 11 FF 06 =833
49776 2A 4F BB A7 ED 52 22 4F =907
49784 BB C1 10 DD 11 03 00 2A =679
49792 4F BB 19 22 4F BB C1 10 =800
49800 CD C9 3A 68 C3 FE 09 C2 =1220
49808 EC C2 3A 6A C3 FE 09 CA =1254
49816 A4 C2 21 6A C3 34 21 68 =881
49824 C3 36 00 C9 3A 6C C3 FE =1065
49832 09 CA BB C2 21 6C C3 34 =980
49840 21 6A C3 36 00 21 68 C3 =720
49848 36 00 C9 3A 6E C3 FE 09 =881
49856 CA D7 C2 21 6E C3 34 21 =1034
49864 6C C3 36 00 21 6A C3 36 =745
49872 00 21 68 C3 36 00 C9 21 =620
49880 6E C3 36 00 21 6C C3 36 =749
49888 00 21 6A C3 36 00 21 68 =525
49896 C3 36 00 C9 21 68 C3 34 =834
49904 C9 01 30 00 09 29 29 29 =382
49912 01 FF 00 A7 ED 42 01 00 =727
49920 3D 09 B1 06 08 7E 12 E5 =634
49928 D5 E1 11 00 01 19 E5 D1 =919
49936 E1 23 10 F1 C9 2A 68 C3 =1059
49944 11 D4 50 CD F1 C2 2A 6A =1097
49952 C3 11 D3 50 CD F1 C2 2A =1185
49960 6C C3 11 D2 50 CD F1 C2 =1250
49968 2A 6E C3 11 D1 50 CD F1 =1099
49976 C2 C9 21 15 B2 34 CD BA =1022
49984 C2 CD 15 C3 C9 CD 2C BC =1253
49992 CD 0D BC CD 55 BC CD CA =1291
50000 C3 00 00 CD 75 C1 CD 9D =1072
50008 BC CD 07 BD CD 65 BC 21 =1116
50016 17 B2 36 00 CD D7 C2 C9 =1070
50024 07 00 01 00 00 00 00 00 =8
50032 CD 19 B2 C3 F5 BA CD 50 =1319
50040 BC 3A 5E BB FE 00 CB CD =1186
50048 85 C3 C3 C0 C3 CD 6A BB =1408
50056 CD 07 BD CD 2C BC CD 0D =1056
50064 BC 21 17 B2 36 00 CD 65 =782
50072 BC C9 3A 53 BB FE 01 CA =1174
50080 76 C3 C3 35 BB 3A 53 BB =1076
50088 FE 01 CA 76 C3 C3 40 BB =1216
50096 06 00 C5 06 FF 05 C2 B5 =844
50104 C3 C1 10 F6 C3 70 C3 00 =1152
50112 00 00 00 00 00 00 00 C3 =195
50120 70 C3 21 53 00 11 CA 50 =722
50128 CD F5 C2 21 43 00 11 CB =964
50136 50 CD F5 C2 21 4F 00 11 =853
50144 CC 50 CD F5 C2 21 52 00 =1043
50152 11 CD 50 CD F5 C2 21 45 =1048
50160 00 11 CE 50 CD F5 C2 21 =980
50168 3A 00 11 CF 50 CD F5 C2 =1006
50176 C9 06 FF C5 06 FF 05 C2 =1119
50184 06 C4 C1 10 F6 C3 70 C3 =1159
50192 CD 45 C3 CD 01 C4 C9 00 =1072
50200 00 00 00 00 00 00 00 00 =0
STOP
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# »INPUT'OUTPUT

## THE FREE YS CLASSIFIED AD SERVICE

**Are you on the hunt for hardware, screaming for software, or pining for a pen pal? Whatever your message, you can leave it here for free! Just fill in the form below.**

## SOFTWARE

■ Will swop *Wizard's Warrior, I'm In Shock, Paratroopers, Horace Goes Skiing, Survival, Make A Chip* for any good Speccy software. Tel. Rumney, Cardiff 791 550 and ask for David.

■ Lots of software to swop. Many recent titles including *Nightshade, On The Run*, etc. Send your list for mine and an sae. Write to D Parker, 94 Willow Lane, North Featherstone, Pontefract, West Yorks WF7 6BG.

■ Will swop *Technician Ted* and *Manic Miner* for *Spy Hunter*. Tel. (0672) 40170 and ask for Christopher.

■ I have *Monty is Innocent, Pitfall II, Hunchback II, Eye of Bain, Finders Keepers* if you are interested. Direct swop of *Survival* for *Bruce Lee*. Tel. Basildon 285875 and ask for Mark.

■ I'll swop *Lords of Midnight* for *Doomdark's Revenge*, and I'll throw in *Spawn of Evil*. Tel. Hemel Hempstead 62380 and ask for Rob.

■ Swop *JSW II, Shadowfire, 911TS, Gyron, Alien 8, Knightlore* and many more. Write to Saqi Shechter, 26 Golomb, Haifa, Israel 33393.

■ Swop my *Lords of Midnight*, Abersoft *Forth* for your *Snowball* and *Masterfile*. Also *WTHA Sea, Brain Damage, Timegate* for either *Lunar Jetman, Zaxxon* or *Moon Cresta*. Write to C D Newell, 6 Cooke Street, Hazel Grove, Stockport, Cheshire SK7 4EG.

■ Swop any of *Gift From The Gods, Doomdark's Revenge, Rocky, Gremlins* for *Dun Darach, Spy v Spy, Herbert's Dummy Run, Frankie* etc. Tel. 01-892 5337 and ask for Paul.

■ I have *Warlock of Firetop Mountain* and will swop it for any other game, preferably an Ultimate game. Please write to Guy Walters, Egham's Farm, Knotty Green, Beaconsfield, Bucks HP9 1XL.

■ Games to swop including *Frankie, Dynamite Dan, Way of The Exploding Fist* and *On The Run*. Tel. 061-860 5803 and ask for Nick.

■ Sinclair *Logo* swop for *Blast*. Tel. (07605) 402 and ask for A Peason.

■ Swop *Shadowfire, Baseball, Dark Star, Match Point, JSW, Softaid* and more for *Out Of The Shadows* or *Cauldron* or *Spy Hunter* or *Highway Encounter*. Tel. Watford 31165 and ask for R Bennett.

■ Will swap *Jasper, Spectipede, Ah Diddums, Survival* and more for *The Quill* and *The Illustrator* or Currah MicroSpeech unit. Tel. (0749) 813527 and ask for Andy.

■ Swop *Sherlock* for *The Artist*. Also *Strangeloop, Jack and the Beanstalk, Mafia Contract* and more. Tel. (0786) 78609 and ask for Robert.

■ Swop *Arnhem* and *Bulge* for *Stonkers* or other war games. Tel. (734) 27333 and ask for Mike.

■ I have lots of software to swop. Send an sae for your free booklet of what I've got. Write to K Jarman, 18 Poplar Close, Biggleswade, Beds. SG18 0EW.

■ Swop your software with a Dutch Spectrum user! Send your list to Robert Hulsebos, Bremstraat 14, 7391HX, Twello, Holland and you will always get a reaction!

■ Many games to swop including *Raid Over Moscow, War of the Worlds*, and *Finders Keepers*. Send your list for mine. Write to Gary Brighton, 111 Studlands Park, Newmarket, Suffolk CB8 7AP.

■ Anyone interested in swoppping Speccy software for Amstrad software? If so, please write to Glynne McDonald, 64 Perth Crescent, Mount Blow, Clydebank, Dunbartonshire G81 4QQ.

■ Will swop issues of *YS* for your software. I have issues 6, 9, 10, 11 and will swop one for any of *Skool Daze, Baseball, The Biz, JSW* or any racing horse predictor. Write to G Jordan, 88 Inchfad Drive, Drumchapel, Glasgow G15 8DD.

■ Swop *Nightshade* for *Alien 9* or *Tapper*. Tel. (0904) 51948 and ask for James.

■ Many top games to swop. Send your list with an sae and I'll send you mine. Write to Melanie Morris, 461 Bellhouse Road, Sheffield, S. Yorks.

■ Swop *River Raid* for any of the following, *Knightlore, Skool Daze, Sabrewulf, Ghostbusters, Alien 8, Everyone's A Wally, Herbert's Dummy Run* or *Bruce Lee*. Write to Lee Jennings, 36 Coronation Road, Stainforth, Doncaster, South Yorks DN7 5DZ.

■ Swop *Underwurlde* for *Knightlore, Fighter Pilot* for Psion's *Flight Simulation, Everyone's A Wally* for *Pyjamarama*. Tel. (09285) 74282 and ask for Lee Derbyshire.

■ Will swop *White Lighting* for 2 of your games. Please send list to Paul Finch, 1 Penfillia Road, Manselton, Swansea, SA5 9HX.

■ I have *The Quill* and manual, will swop for *Dukes of Hazzard, Lode Runner* or *Project Future*. Write to Stephen Butler, 4 Waterloo, Pembroke Dock, Dyfed, S Wales SA72 6UA.

■ Swop *Ghostbusters, Shadowfire, OCP Editor/Assembler, Pssst, Cosmic Cruiser* and *Ground Attack* for *Starion, Spy Hunter, YS MegaBasic, Dun Darach* or others. Tel. (04892) 4943 and ask for Nigel.

■ Have you got *Starion*? If so, will you swop the *Guide To Playing The Hobbit* and *More Games For Your ZX Spectrum* as new. Tel. Ireland 052-23372 and ask for Darryl.

■ Lots of new software to swop, including *Spy v Spy, Shadowfire, Dun Darach, The Artist*. Send sae for list. Write to Chris Jenkins, 48 Gladys Street, Aberdare, Mid Glamorgan, S. Wales.

■ I want *YS MegaBasic*, and I've got loads of great games to swop including *Bruce Lee, JSW II, Brian Bloodaxe*. Tel. (0279) 28303 and ask for Michael.

■ Will swop *The Hobbit, Valhalla* and *JSW* for *Quill* Series C and *The Illustrator*. Write to Scott Young, 2 Drums Ave, Paisley, Scotland PA3 1PL.

■ Have *Knightlore, Frankie, Boulderdash* and other top games to swop for a MicroSpeech or software. Send your list for mine to David Thorpe, 23 Inkerman Terrace, Whitehaven, Cumbria CA28 9AF.

■ Swop three games for *Alien 8* or two for *Skool Daze*. Choose from *Great Space Race, Bugaloo, Traxx, Alcatraz Harry* and more. Tel. Sandbach 60446 and ask for Terence.

■ Over 250 titles to swop for a modem or other hardware or software. Send lists to L Kroese v. Oldebareueld Str 86, 1052 KG Amsterdam, Holland.

■ Every back issue of *Your Spectrum* on offer! What is your price? Let me know what you'll pay for one or more issues. Tel. Oxted 6175 and ask for S F Clark.

■ I'll swop *Make A Chip, Survival* and *Horace Goes Skiing* for *Dambusters* or *Skool Daze* and issues 14 and 15 of *YS*. Write to David Boble, 34 Monteith Gardens, Clarkston, Glasgow, Scotland G76 8NU.

■ Will swop *Zaxxon, Pedro, Grid Runner* and *Zip Zap* for *Nodes of Yesod* or *Daley's Supertest*. Tel. 01-886 4954 and ask for Faizal.

■ Swop *HURG, Melbourne Draw* and *BMX Racers* for a joystick and interface. Will also swop *Tir Na Nog* for *Alien 8*. Write to Alex Jawes, 7 Priory Street, Cambridge, Cambs CB4 3QH.

■ I have *White Lightning, HURG*, Abersoft *Forth* and *Melbourne Draw* to swop. Please write to P K Smith, 2 Faircroft Avenue, Beechdale Road, Nottingham, NG8 3AL.

■ Lots of software to swop, please send your list for mine. Also, has anybody got a spare *Lode Runner* codesheet? Please write to D Wheatley, 20 Tudhoe Moor Estate, Spennymoor, Co. Durham DL16 6HA.

■ I have *Lunar Jetman, Astro Blaster, Night Flite II, Maze Death Race, MegaPede* and *Horace Goes Skiing*. Wanted — Currah MicroSpeech. Write to Colin Rice, 75A, Corbets Tey Road, Upminster, Essex.

■ Swop *Fighter Pilot, Lords of Midnight, YS MegaBasic, Monopoly, Scrabble, Daley's Decathlon, Beach Head, Zzoom, Monitor* and much more, for software or hardware. Write to Chreag Anderson, Harland House, Welbeck College, Worksop, Notts. S80 3LN.

■ I have many well-known titles to swop. Send your list for mine please. Write to Magnus Ramage, 16 Claremont Gardens, Milngavie, Glasgow, Scotland G62 6DG.

■ Will swop six games, *Scrabble, Horace Goes Skiing, Chess, Chequered Flag, Survival* and *Make A Chip* for a cricket game. Please write to Tejram Dyal, 43 Nigel Road, Peckham, London SE15 4NP.

■ Will swop *White Lightning, Zaxxon* and *Softaid* for *Spy Hunter*. Two of these for *Orc Attack* or *Dukes of Hazzard*. Tel. (0625) 22559 and ask for Karl Sheridan.

■ I have over 600 titles to swop for other software, or perhaps an Interface and software. Please write to Jose Suarez Marquez, C/Vazquez Varela 19-3-B, Vigo, Spain.

■ Swop Melbourne House *Machine Code Guide* for *Chequered Flag, Pole Position* or *Tir-Na-Nog*. Write to Robin Gray, 53 King's Road, Beith, Ayrshire.

■ Will swop any two of *Hungry Horace, Horace and the Spiders, Embassy Assault, VU-3D* or *Chess* for *The Hobbit*. Tel. (06473) 3594 and ask for Lucien.

■ Spectrum software including *Nightshade, Nodes of Yesod*. Over 50 titles altogether. Will sell together or separate. Tel. (0522) 690330 and ask for Ian.

■ *Logo* wanted. Will swop *Chess, Quadracube, Make A Chip, Chess Tutor, Valhalla* and *VU-3D*. Tel. Luton 21122 ext. 8308 and ask for Paul Rex.

■ Swop 3 or 4 of *Gnasher, Chiller, Bullseye, Wizard's Warrior, Action Biker* or *BMX* for any decent game. Tel. Uttoxeter 3674 and ask for Tim.

■ Software to swop. Send your list and an sae to Matthew Platts, 33 The Tartars, Sherston, Malmesbury, Wilts SN16 0NT.

## HARDWARE

■ Currah MicroSpeech £19, Currah MicroSlot £4, Microdrive wallet — holds four drives, 50p each. Tel. (0582) 597 000 and ask for Stephen.

■ Swop Tandy Chess Computer (cost over £60) for quality software or hardware. What've you got? Tel. (04215) 63618 for more info. Ask for Tony.

■ Dk'tronics Lightpen, original box and instructions. Good condition. Will sell for £13. Tel. (0672) 41070 and ask for Chris after 4 pm.

■ ZX Spectrum for sale, Currah MicroSpeech, Protek Joystick Interface, over £230 of software and magazines. Many top games. Tel. (0900) 825 123 and ask for Richard.

■ Voice Recognition Unit by Orion Data Ltd. Complete with mike. As new, boxed, cost £49.95. A bargain at £27 ono. Tel. (0235) 834589 and ask for Mr Samler.

■ Sinclair printer paper — four rolls for sale, £7.50. Please write to Alexander Black, 4 Rockburn Drive, Clarkston, Glasgow G76 7PE.

■ Spectrum rubber keyboard for sale. Hardly used. Will sell at bargain price of £9. Tel. Hull 650 903 (after 5 pm) and ask for James.

■ 48K Spectrum, Lo-profile keyboard, cassette recorder, 30+ games, including *Frank Bruno's Boxing, Match Day, Technician Ted*. Cost £550+, will sell for £200. Tel. 021-459 4993 and ask for Gary.

■ 48K ZX Spectrum, Interface 1, Microdrive, Ram Turbo interface, Microdrive and cartridges, Currah MicroSpeech, £250+ worth of software. Tel. 051-608 1330 and ask for Iain.

■ Competition! First person to send me a free ZX or Alphacom printer will win a cheque for £15. Tel. (0642) 314096 and ask for Pete.

■ Atari VCS with library of 22 cartridges, including *Pacman, Frogger, Missile Command, Sword Quest* and *Donkey Kong* plus two joysticks and paddle controls. A mere £70 please! Write to N Buxton, 20 Junction Road, Andover, Hants.

■ 48K Oric 1 plus manual, all leads and software including *Chopper, Ultra, Hobbit* and *Donky Kong*. £85 ono.. Tel. (0277) 227 921, after 6pm, and ask for Christopher.

■ Dk'troniks Light Pen, 5 months old. Still under guarantee. Will sell for £10. Tel. Larkhall 885407, after 4 pm and ask for Mark.

■ Alphacom printer for sale, £35. ZX printer £20. Interface 1, £30. Prism VTX modem, £35. All prices include p&p. Tel. 031-556 3831 and ask for Alex.

■ Mirage Microdriver £30. Interface 1 with RS232 printer cable £35. Both 'as new' and under guarantee. Tel. 041-959 6125 and ask for Gregor.

■ Will swop Currah MicroSpeech, *Knightlore* and *Centi-bug* for a ZX printer. Also want *The Artist*. Please tel. Long Eaton 873 0775 after 5 pm and ask for D Godsall.

■ Spectrum 48K, 6 months old and hardly used. Also many recent games to swop. Tel. (03744) 69458 and ask for Dave.

■ Currah MicroSpeech and Trojan Light Pen for sale. £20 for both. Also 400+ software titles to swop. Send your list for mine to Geoffry Inns, 26 Bowyer Close, Basingstoke, Hants RG21 1UZ.

■ Spectrum 48K for sale, also cassette recorder and joystick. Also, over £100 worth of software to swop. Tel. (0292) 79419 and ask for J Adams.

■ Cheetah 32K Rampack as new, only £19.99. Tel. Great Missenden 4345 and ask for W Morris.

■ 48K Spectrum+, Interface 1, Microdrive and a branded new Seikosha GP50S printer. Software including *Decathlon, JSW II, Hypersports* and *Tasword II*. Bargain at £290. Tel. Stow-on-the-Wold 31965 and ask for Tony.

■ Transform keyboard plus buffer £30, Microdrive £20, Sinclair RS232 cable £5, Ness Load/Save switch and Beep booster £3. Tel. (0706) 227672 and ask for J Ormerod.

■ 48K Spectrum, Dk'troniks keyboard, Downsway interface, Quickshot II, joystick, 22 pieces of software and books. A bargain at £100! Tel. (020622) 2168 and ask for Kev.

■ Cheetah 32K rampack for £15 or *The Quill*/Light Pen. Will consider another piece of hardware instead. Tel. (0933) 675 079 and ask for Brian.

■ Spectrum Dk'troniks keyboard, Interface 1, 11 cartridges, Kempston joystick and interface, cassette recorder, books, magazines, software, faulty Alphacom printer thrown in! Bargain at £250. Tel. 061-370 6739.

■ 48K Speccy, tape recorder, joystick, interface and games including *Manic Miner, Penetrator* and *Cavelon*. Bargain at £150 ono. Tel. 021-777 1592 and ask for Greg.

## BOOK YOUR FREE AD HERE

I'd like you to insert the following advertisement in the next available edition of INPUT/OUTPUT.

Please enter it under the following category:
☐ HARDWARE ☐ SOFTWARE ☐ WANTED
☐ MESSAGES ☐ CLUBS & EVENTS ☐ PEN PAL

Address this coupon to: INPUT/OUTPUT, *Your Spectrum*, 14 Rathbone Place, London W1P 1DE.

If you don't want to mutilate your issue, send a photocopy instead!

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# »INPUT'OUTPUT

■ 48K Spectrum+, cassette recorder, games, books and mags. £200 ono. Please write to Geraint Aubrey, 38 Mayflower Drive, Marford, Clywd, Wales, LL12 8LD.

## WANTED

■ Wanted, *Art Studio* or *The Artist*. Would swop *Skool Daze, Finders Keepers, Mozaics, Zig-Zag* and *Jumbly*. Please write to Christopher Martin, 14 Langham Dene, Kenley, Surrey, CA2 5RX.

■ Assembler wanted! Either Hisoft's *Devpac 3*, or the Picturesque Assembler/Monitor. Write to Andrew Cunningham, 20 The Chanonry, Old Aberdeen, Aberdeen AB2 1RP.

■ Wanted, a Currah MicroSpeech. Will buy or swop for software, including *Blockbusters, Finders Keepers, Scrabble*, etc. Tel. (0746) 3182 and ask for Gregor.

■ Hints, POKEs and cracker's advise for games like *Tir Na Nog, Doomdark's Revenge, Avalon, Shadowfire* and *Alien 8*. I'll answer all letters. I'm a 22 year old loony Speccy fan. Write to Frank Reeders, Pr Margrietstrasse 9, 4797 HW Willemstad, Netherlands.

■ Wanted — an assembler, Pascal, C, Forth, Lisp, Micro — Prolog, any utility program. Can offer *Ghostbusters, TLL, View To A Kill, Chequered Flag, Flight Simulation* and *Make A Chip*, or cash. Tel. (0616) 520051 and ask for D Hirani.

■ Wanted — software swop lists for mine. Write to Diane Harper, 16 Badgeney Road, March, Cambs PE15 9PA.

■ Wanted, *Go To Hell* (it's nothing personal?) Will swop *Way Of The Exploding Fist*. Tel. Tenterden 3094 and ask for Fredrik.

■ Wanted, 2000AD back issues 1-309. I'm offering 40 Refractor Telescope, 1-17 *YS*, 1-12 Insight, Data Car, and *Avalon*. Write to Michael Sanderson, 27 Newholme Avenue, Haltwhistle, Northumberland, NE49 9ET.

■ Wanted, a Datel sound sampler. Will swop a VTX5000 modem and software. Tel. 051-928 4364 and ask for Andy.

■ Wanted, 32K rampack and a book to teach machine code. Let me know the price and send it to Kevin Cusack, O'Deas Road, Kilruch, Co. Clare, Ireland.

■ Wanted! *Moon Cresta* urgently! Will swop for *Grand National*, and *Chequered Flag* or *Travel with Trashman* and *Kentilla*. For further details Tel. (0782) 625911 and ask for Mark.

■ Interface 1 wanted. Will swop for £40 worth of software including *Softaid, Pole Position, Eskimo Eddie, Cauldron* and *TLL*. Tel. (0183) 848468 and ask for Andrew.

■ Wanted, *Rocky, Nodes of Yesod, Herbert's Dummy Run, Shadowfire, Dambusters, Frankie* and other recent games. Will swop other recent games or cash. Tel. Ewell, Surrey 393 3920 and ask for Alistair.

■ Wanted, ZX printer or better. Will pay up to £25. Tel. (0743) 75404 and ask for Richard.

■ I want your old software. Will pay a good price. I also want a ZX printer and Saga keyboard. Write to Anthony Brown, 49 Primate Road, Plains Farm, Sunderland, SR3 1RP.

■ Issue 7 of *YS* please. Will pay a good price. Write to MW Parry, 34 Milbrook Drive, Old Hall Estate, Kirkby L32 1TF.

■ Wanted *YS* issue 4. Will pay a reasonable price. Write to Manuel Freire, Avenida Sanchez Arjona 39-8-B, Sevilla, Spain 41010.

■ Wanted, *Toutenkham* by Micromania. Please write to William Hepburn, 8 Malvaig Lane, Blantyrr, Glasgow G72 0RS.

■ Wanted issue 6 of *Your Speccy*. I'll pay up to £5. Tel. (0638) 664329 after 6 pm and ask for Gary.

■ Circuit diagram for an issue 4 Speccy required. Also a circuit or construction details for a centronics interface. Send details to B T Taylor, 61B Solent Road, Drayton, Portsmouth PO6 1HJ.

■ Currah MicroSpeech wanted. Will swop for any three games including *Sherlock, Avalon, The Hobbit, Caterpilla* and more. Tel. Appley Bridge 2910 and ask for Mick.

■ Wanted, a brand new CBM64 and disk drives. Will swop for *Horace Goes Skiing*. Write to Kevin Dominey, 11 Kitchener Crescent, Waterloo Estate, Poole, Dorset, BH17 7HU. (*Seems reasonable. Ed*).

## PENPALS

■ I would like some pen pals to swop games hints and tips. I'm French. Send your list for mine to Arnod JF, 13 Place du Forum 57000, Metz, France.

■ You must like me! I want a pen pal to swop games, hints and tips. I have over 200 games to swop. Send an sae to Wayne Griffin, 27 Melling Road, Aintree, Liverpool L9 0LE.

■ My name is Rob Unwin. I'm very square and would like a 12 year old pen pal preferably female. Write to 12 Poplar Avenue, Lutterworth, Leics. LE17 4TH.

■ I'm nearly 15 and would like a pen pal of any age who likes maps, tips and POKEs. Send your list for mine. Write to Martin Playford, 7 Kingston Close, Cleethorpes, S Humberside, DN35 0QN.

■ Lonely, romantic 16 year old male, into Queen, Eastwood films and computers is looking for females into adventures, rock concerts and long country walks. Please include a photo. Write to Fraser McNichol, 15 Commonside Street, Airdrie, Lanarkshire, Scotland ML6 6NQ.

■ Help! Pen pal wanted to swop games, hints and tips. Send a list of what you have or what you want. Please write to Frank Papadopoulos, 13 Kroombit Street, Dulwick Hill, NSW, Australia 2203.

■ 17 year old hacker, programmer, games freak wants a pen pal for swops, hints and tips. All letters answered. Write now to Steve Tomaszewski, The Square, Saltash, Cornwall PL12 4SH.

■ Pen pal, boy or girl age 12+ who's interested in Spectrum programming in Basic or machine code. I want to swop ideas and tips about writing games etc. Please write to Bradley Clutton, 56 Ranelagh Gardens, Ilford, Essex IG1 3JP — Now!

■ Wanted, a female pen pal, age 11-12 to swop info on machine-code, POKEs and more. Please enclose a photo. Write to Paul Hayes, 23 Derby Road, Shepway, Maidstone, Kent, ME15 7JJA.

■ Calling all American Speccy owners. If you're ace at machine code and think Speccy arcade games are great, then please write to Kevin Coverdale, 664 Analby High Road, Hull, N Humberside, HU3 6UZ.

■ Pen pal needed for an adventurer. No previous owners! He comes complete with batteries. Write to Gutterheart Page, 3 Larwood Square, Cricketers Way, Andover, Hants SP10 5DR.

■ Scottish lad would like people to write, if they're into games, machine code, hacking, drawing computer characters and being daft. Please write to Michael Bell, 91 Machie Place, Dunfermline, Fife, Scotland.

■ I want a female Speccy owner (12-14 years) for a pen pal. My interests include FGTH and computers. Interested girls? Then write to me, Stuart Green, 38 Newborough Street, Burton Stone Lane, York YO3 7AT.

■ Pen pal wanted. I am 15 and would like to write to someone the same age. My hobbies include shooting, fishing and playing with computers. Write to P Harrison, Castle Hill, Warcop, Appleby, Cumbria, CA16 6PD.

■ Male or female pen pal wanted. 13+. I have 160 games to swop. Please write to Wayne Griffin, 27 Melling Road, Aintree, Liverpool.

■ Boarding school student in Texas needs software, corrspondence and info from pen pals of 16+ years. (His house is near Peterborough). Write to TH Ward, Kawonk, 2 Harby Road, Rugby, Warks.

■ I am 15, an arcade player and would like a female pen pal. If possible, foreign. I'm looking for tips on *Urban Upstart*. Send a photo — I'll send mine. Write to Frazer Smith, 190, Lomond Road, Coatbridge, Lanarkshire ML5 2NL.

■ Female pen pal wanted for lonely male Spectrum owner. I like different types of music and I'm interested in swopping hints and tips on simple programming. I'm 13. Please write to Ashish Chanarana, 25 Maheshwar, Niketan, Peddar Road, Bombay 400026, India 16509.

■ I am 14 years old and would like a pen pal to exchange ideas on gaming and hacking. I have a Speccy and a Beeb. Write to Stuart Meese, 1 Sandy Lane, Albrightoon, Nr Wolverhampton WV7 3ES.

■ I would like a pen pal to swop POKEs, maps and games with. Especially someone to help me hack into games. Boy or girl as long as you're a good hacker. Write to Mark Cairns, Glenfield House, 246 Comber Road, Lisburn, Co. Antrim, BT27 6XZ.

■ 17 year old Israelian seeks Spectrum owning pen pals worldwide. Female (are there any?) or male — to swop programs and crazy ideas. Write to Claudiu Schiller, Rh Gedaliahu 7/5, Haifa, Israel 32587.

■ I'm 16, and would like to swop ideas, programs and other things Spectrum. My other hobbies include body building. Write to Aymen Ali Al Bannaw, PO Box 15471, Daiya, Kuwait.

■ Pen pal wanted, age 14, to swop hints and tips on games, and programming ideas. Please write to Tim Claveley, 73 Ladysmith, East Gomeloon, Salisbury, Wilts SP4 6LE.

■ Female Speccy lover needed to swop games, hints and tips. I am 12 and games mad! Please write to Chris Buxton, 8 Byrl Street, Keighley, West Yorkshire BD21 3LY.

## MESSAGES

■ I am 14 and have had my Speccy for six months and would like to find out how to load and save machine code programs and things like that.

■ For sale! *YS* issues 2 (without poster), 3,4,11,12,13,14 and 15. All in excellent condition (but for 13, which is slightly tatty!) Offers please to S Butterfield, 1 Poole Crescent, Crossgates, Leeds LS15 7NB.

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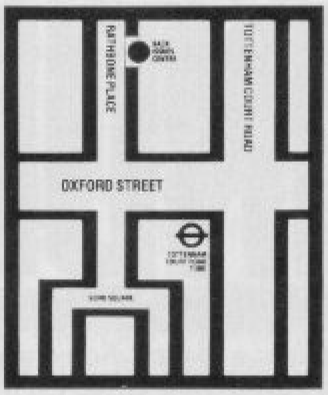
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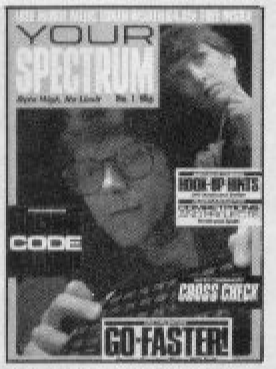
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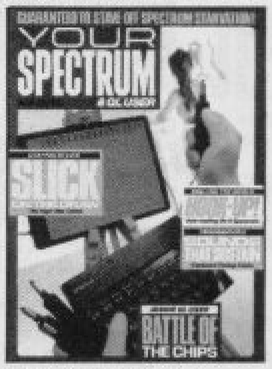

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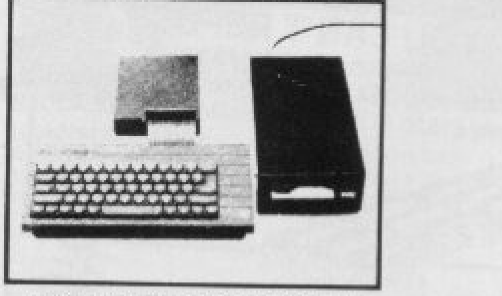
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# HACK FREE ZONE

***Hi, Hi, Hi games-playing hexperts, it's me* Hex Loader *with another helpful heap of your trips and ticks for winning at those wacky games . . .***

Zo, you haz come back ha? I knew you would — there we were last month poised at the very brink of solving *Dun Darach* when I suffered a tape loading error. Not to worry, the third and final part of the **P Bradford** serialised solution saga is coming up right now:

Go through the next door (bet you've tried that by now, haven't you?) and you'll be presented with a row of six doors (row A). Take the third door to row B. Third door again and you're on row C. Now take the fifth door and you'll come to row D. From row D, it's the fifth door. Betcha reckon all this took ages to work out! Nah, the 2**25 scroll from last month — and before you load up your *YS Megabasic*, that works out at 33554432 — gives you the route to take. So from row A, we took door 3, then door 3, then door 5 and so on. Easy enough.

Once you get to the end of the row of doors, you should be faced with a normal door. Inside, spell out the word O A K and pick-up the L-key. Find Loeg and give it to him and he will say "Fair exchange — let's go . . ." and witter on much like I do. Now go to South Gate on Claw Lane. Make sure you put the asterisk on another object besides the L-key or the pickpockets will get it. Use the Portal to get to the Soke and go through the South Gate for the final message. And that's it — thanks a million 'P' — couldn't have done it without you!

So now I've given the game away, I might as well add insults to information and tell you what **Charlie Morgan** thought of the game. First, he thought the ending was a bit of an anti-climax — the final message is just "The End. Ta from GG!". Worse, you don't even have to free Leog from jail to finish the game (ah, but it's more fun than just finishing it!) There's also a trawler full of red-herrings — deliberate or a last minute rush asks our man in Croydon?

Two examples; entry to Laydos is with the spell "Show the lady" — you'll get the message "forbidden". Gargoyle says this is because there's all sorts of naughty, naughty goings on inside Laydos. But if you can't get in, why is it there at all? To enter 21 Cinder Bank you need "Gold in Ashes". Inside is a Pyrite which no one in the game wants and therefore seems to be of no use whatsoever. Umm . . . yes, what does the Gargoyle say to that? Meanwhile, anybody been to *Marsport* or more importantly got out again?

Right then, who's next? Here's a letter from **Peter 'Gutterheart' Page** of Andover, Fist (sorry, Hampshire). Oh, and here's another one . . . and here's another one. Thought you could crush me into printing some of your magic words, huh? You're right! Excerpt one coming up:

". . . Aha! Yep, that's right! I've finished Ocean's *Pud Pud* (2nd September). To finish, you have to collect 10 puds then make your way to the last location (if you imagine the map is on a 30 x 14 grid then this would be location 8,23). Try to eat power-giving objects, winged objects, snakes, crabs, bats, skulls and walking blobs. Make a map . . . yours puddingly . . . Peter Page".

Nice to see a pudding-head who writes in my own imitable style. More pages from the Page guide to games-beating coming up soon — he really knows his stuff.

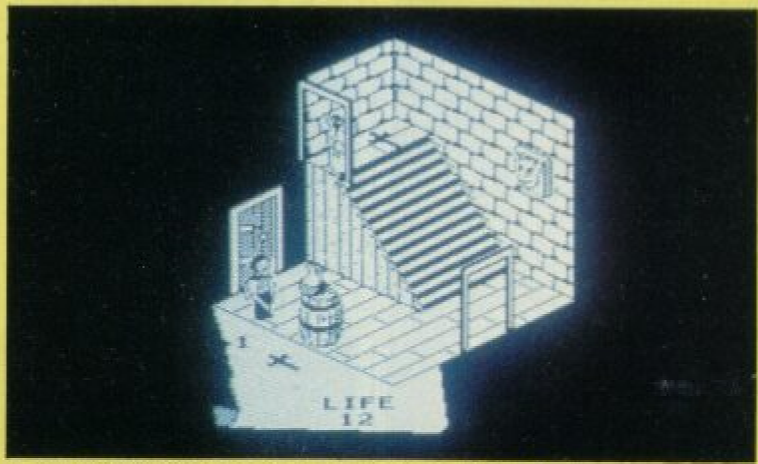
**James Fitzpatrick** who's holed up in West London writes on *Pyjamarama*: always get the £1 coin and change it for the penny (those £1s burn a hole in your pocket anyway). You can then get into the bathroom and grab the hammer as well as the scissors which will help you cut the balloon and get the Box Key — provided the help-on switch is down. Phew!

Meanwhile, *Fists* are exploding all over East Lothian courtesy of **Graham Cairns**. The way to down an opponent of any Dan is to walk three side steps towards him then kneel down and punch him when he's in range. Sounds a bit below the belt to me.

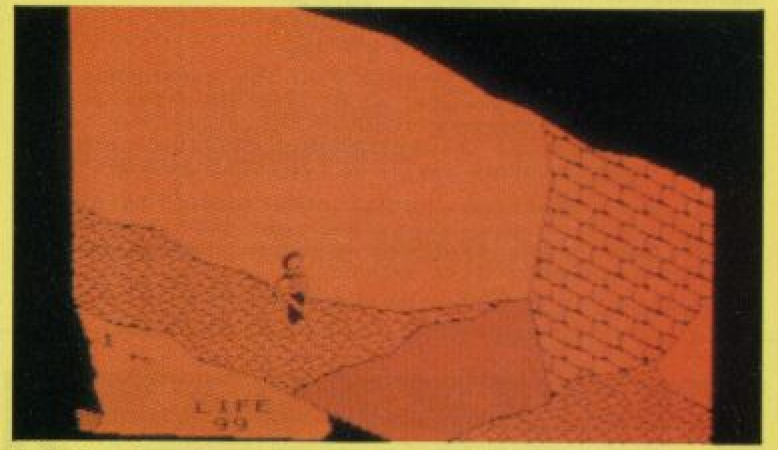
**Evan Mason**, live from Zimbabwe, talks of *Dragontorc*. If you find yourself in the Druid's Last Sanctuary and get transported to a room without any doors (*Carful Hex, we're trying to find one for you! Ed*) then don't go spair, sorry despair — just try your Leyrod!

Right, dammit, that's enough for one month. Next time I'm taking over . . . they've promised me more memory space for my winning bytes so I'm going to need more input from you lot out there — keep writing to me, **Hex Loader**, at *YS*, 14 Rathbone Place, London W1P 1DE and keep 'em tips a-coming which reminds me the Editor can't pull the plug on me this month 'cos I got Trouble-totin' Pete to screw the plug to the wall so they can't get away with that old trick and I can tell you about something that had slipped my mind when I was dumping that other stuff which is that . . . hey, no, that's just not fair I mean . . . L BREAK into program, 3000:8. (*Sorry about that but we're running out of magazine! Ed*).

**READER SPOT: FAIRLIGHT**




**Don't Get Cross: Small buglets rounded up for free, courtesy of *Kit Simpson* of Manchester . . . 'cos I bet you thought that to get past the mad monk you'd need to get the cross from under the throne and chuck it at him didn't you? Well, yes, that does work doesn't it? Ah, why not save yourself the trouble and climb up on the edge of the stair, right at the top and next to the monk and then jump against the door frame. Huh! I didn't think you were thin enough to fit through the gap either . . .**



**Cliff Hanging: Oops . . . I accidentally erased the name of my valiant reader who helped me crack this one but here goes all the same: all you do is collect two stools from the Troll's cave and bring them back to the cliff. Push 'em as far over the cliff as you can (here's one time when it's not safe to fall between two stools) and fetch two barrels from the cave. Climb on the stools and chuck the barrels over the edge. Haha . . . you can now climb down in comfort!**


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